HIGHLIGHTS

REVISION NO. 33 Jun 01/10

Pages which have been revised are outlined below, together with the Highlights of the Revision

CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY
CHAPTER 57		
L.E.P. 1- 3	Revised to Reflect this revision indicating new,revised, and/or deleted pages	
T. OF C. 3	Revised to reflect this revision	
57-20-28 401- 402, 404- 406	Minor, non technical corrections **PARA. 3.D. STEP (1)(B)3 - CAUTION REVISED. NOMENCLATURE CHANGED FROM 'AIRBUS INDUSTRIE' TO 'AIRBUS'.**	
57-20-34 601- 611, 613- 615, 617, 619- 622, 624- 627, 629- 633, 635	Minor additions and amplification **PARA. 3. ILLUSTRATION "MAIN GEAR ATTACHMENT - DETAILS" AMENDED AND REISSUED AS SHEET 1 OF TWO SHEETS.**	
57-44-13 401- 403	Topic cancelled	
57-45-11 401- 405	Minor additions and amplification **PARA. 1. EQUIPMENT AND MATERIALS LIST REVISED ITEM H. CHANGED FROM 98A27808013000 (SLING-KRUEGER) TO 98F27508498000 (HOIST R/I FLAP/SLAT).**	
57-51-34 401- 403	New Topic/New Configuration Mod.0001X0007 incorporated **TECHNICAL PUBLICATIONS-BASIC MODIFICATION - MODIFY DESIGN.**	

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CHAPTER 57

WINGS

LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively
Remove and insert the affected pages and complete the Record of Revisions and the Record of Temporary Revisions as necessary

CH/SE/SU	C	PAGE	DATE
RECORD			
OF TEMP.			
REVISION			
L.E.P.	R	1- 3	Jun01/10
T. of C.		1	Dec01/06
T. of C.		2	Jun01/06
T. of C.	R	3	Jun01/10
T. of C.		4	Jun01/06
57-00-00		1	Dec01/90
57-00-00		2	Dec01/90
57-00-00		3	Dec01/90
57-00-00		4	Dec01/90
57-00-00		5	Dec01/90
57-00-00		6	Dec01/90
57-00-00		7	Dec01/90
57-00-00		8	Dec01/90
57-00-00		9	Dec01/90
57-00-00		10	Dec01/90
57-00-00		11	Dec01/90
57-00-00		12	Dec01/90
57-00-00		13	Dec01/90
57-00-00		14	Dec01/90
57-00-00		15	Dec01/90
57-00-00		601	Dec01/90
57-00-00		602	Dec01/90
57-00-00		603	Jun01/94
57-10-00		1	Dec01/90
57-10-00		2	Dec01/90
57-10-00		701	Dec01/06
57-10-00		702	Dec01/90
57-10-00		703	Dec01/06
57-20-00		1	Dec01/90
57-20-00		2	Dec01/90
57-20-00		3	Dec01/90
57-20-00		4	Dec01/90
57-20-00		5	Dec01/90
57-20-00		6	Dec01/90
57-20-00		7	Dec01/90
57-20-00		8	Dec01/90
57-20-00		9	Dec01/90
57-20-00		10	Dec01/90
57-20-00		11	Dec01/90
57-20-12		601	Dec01/90
57-20-12		701	Jun01/02
57-20-12		702	Dec01/90
57-20-12		703	Jun01/02
57-20-12		704	Jun01/02
57-20-12		801	Dec01/92
57-20-24		401	Jun01/08
57-20-24		402	Jun01/04
57-20-24		403	Jun01/04
57-20-24		404	Jun01/94
57-20-24		405	Dec01/90
57-20-24		406	Jun01/08
57-20-24		407	Jun01/04
57-20-24		408	Jun01/04
57-20-24		409	Jun01/04
57-20-24		410	Dec01/90
57-20-24		411	Dec01/90
57-20-24		412	Jun01/08
57-20-24		413	Jun01/08
57-20-24		414	Jun01/08
57-20-24		415	Jun01/08
57-20-24		416	Jun01/08
57-20-24		417	Jun01/08
57-20-24		418	Jun01/04
57-20-24		419	Jun01/08
57-20-24		420	Jun01/08
57-20-24		421	Jun01/04
57-20-24		422	Jun01/04
57-20-24		423	Jun01/04
57-20-24		601	Jun01/06
57-20-24		602	Jun01/06
57-20-24		603	Jun01/05
57-20-24		604	Jun01/05
57-20-28	R	401	Jun01/10
57-20-28	R	402	Jun01/10
57-20-28		403	Jun01/08
57-20-28	R	404	Jun01/10
57-20-28	R	405	Jun01/10
57-20-28	R	406	Jun01/10
57-20-28	D	407	
57-20-34		401	Jun01/02
57-20-34		402	Dec01/92
57-20-34		403	Jun01/02
57-20-34		404	Jun01/02
57-20-34	R	601	Jun01/10
57-20-34	R	602	Jun01/10
57-20-34	R	603	Jun01/10
57-20-34	R	604	Jun01/10
57-20-34	R	605	Jun01/10
57-20-34	R	606	Jun01/10
57-20-34	R	607	Jun01/10
57-20-34	R	608	Jun01/10
57-20-34	R	609	Jun01/10
57-20-34	R	610	Jun01/10
57-20-34	R	611	Jun01/10
57-20-34		612	Jun01/09
57-20-34	R	613	Jun01/10
57-20-34	R	614	Jun01/10
57-20-34	R	615	Jun01/10
57-20-34		616	Jun01/09
57-20-34	R	617	Jun01/10
57-20-34		618	Jun01/09
57-20-34	R	619	Jun01/10
57-20-34	R	620	Jun01/10
57-20-34	R	621	Jun01/10
57-20-34	R	622	Jun01/10
57-20-34		623	Jun01/09
57-20-34	R	624	Jun01/10
57-20-34	R	625	Jun01/10
57-20-34	R	626	Jun01/10
57-20-34	R	627	Jun01/10
57-20-34		628	Jun01/09
57-20-34	R	629	Jun01/10
57-20-34	R	630	Jun01/10
57-20-34	R	631	Jun01/10
57-20-34	R	632	Jun01/10
57-20-34	R	633	Jun01/10
57-20-34		634	Jun01/09
57-20-34	R	635	Jun01/10
57-20-35		401	Dec01/95

Printed in France

CH/SE/SU	C	PAGE	DATE
57-20-35		402	Dec01/95
57-20-35		403	Sep01/91
57-20-35		404	Dec01/95
57-20-35		405	Jun01/02
57-20-35		406	Dec01/95
57-20-35		407	Jun01/02
57-20-35		601	Jun01/97
57-20-35		602	Jun01/97
57-20-35		603	Jun01/97
57-20-35		604	Jun01/97
57-20-35		605	Jun01/97
57-20-35		606	Jun01/97
57-20-35		701	Jun01/97
57-20-35		702	Jun01/97
57-20-35		703	Jun01/97
57-20-35		704	Jun01/97
57-20-41		401	Jun01/91
57-20-41		402	Jun01/91
57-20-41		403	Jun01/91
57-23-11		401	Jun01/98
57-23-11		402	Jun01/98
57-23-11		403	Jun01/98
57-23-11		404	Jun01/98
57-23-11		405	Jun01/98
57-23-11		406	Jun01/98
57-23-11		407	Jun01/98
57-23-11		408	Jun01/98
57-23-11		409	Jun01/98
57-23-11		410	Jun01/98
57-23-11		411	Jun01/98
57-23-11		412	Jun01/98
57-23-11		413	Jun01/98
57-23-11		414	Jun01/98
57-23-11		415	Jun01/98
57-23-11		416	Jun01/98
57-23-11		417	Jun01/98
57-23-11		418	Jun01/98
57-23-11		419	Jun01/98
57-23-11		420	Jun01/98
57-23-11		421	Jun01/98
57-23-11		422	Jun01/98
57-23-11		423	Jun01/98
57-23-11		424	Jun01/98
57-23-11		425	Jun01/98
57-23-11		426	Jun01/98
57-23-11		427	Jun01/98
57-23-11		428	Jun01/98
57-23-11		429	Jun01/04
57-23-11		430	Jun01/98
57-23-11		431	Jun01/98
57-23-11		432	Jun01/98
57-23-11		433	Jun01/98
57-23-11		434	Jun01/98
57-23-11		435	Jun01/98
57-25-17		401	Jun01/03
57-25-17		402	Dec01/90
57-25-17		403	Dec01/90
57-25-17		601	Jun01/03
57-25-17		602	Dec01/90
57-30-00		1	Dec01/90
57-30-00		2	Sep01/91
57-30-11		401	Dec01/90
57-30-11		402	Dec01/90
57-30-11		403	Dec01/90
57-30-11		404	Dec01/06
57-30-11		405	Dec01/06
57-30-11		406	Dec01/06
57-30-11		407	Dec01/06
57-30-11		408	Dec01/06
57-30-11		409	Dec01/06
57-30-11		601	Dec01/90
57-30-11		701	Dec01/90
57-30-11		702	Dec01/90
57-30-11		801	Jun01/93
57-30-11		802	Dec01/90
57-30-11		803	Jun01/93
57-30-11		901	Jun01/04
57-30-11		902	Jun01/91
57-30-11		903	Jun01/04
57-40-00		1	Dec01/90
57-40-00		2	Dec01/90
57-40-00		3	Dec01/90
57-41-00		1	Dec01/90
57-41-00		2	Dec01/90
57-41-28		401	Jun01/03
57-41-28		402	Jun01/03
57-41-28		403	Jun01/91
57-41-28		404	Jun01/91
57-41-28		405	Jun01/03
57-41-28		406	Jun01/03
57-41-28		407	Jun01/03
57-41-34		601	Dec01/90
57-41-34		602	Dec01/90
57-41-34		603	Dec01/90
57-41-34		604	Dec01/90
57-41-34		605	Dec01/90
57-41-34		606	Dec01/90
57-41-34		607	Dec01/90
57-41-34		608	Dec01/90
57-41-34		609	Dec01/90
57-41-34		610	Dec01/90
57-41-34		611	Dec01/90
57-41-34		612	Dec01/90
57-41-34		613	Dec01/90
57-41-34		614	Dec01/90
57-41-34		615	Dec01/92
57-41-34		616	Dec01/90
57-41-34		617	Jun01/93
57-41-34		618	Jun01/93
57-41-34		619	Jun01/93
57-41-34		620	Jun01/93
57-41-34		621	Jun01/93
57-41-34		622	Jun01/93
57-41-34		623	Jun01/93
57-41-34		624	Jun01/93
57-41-34		625	Jun01/93
57-41-34		626	Jun01/93
57-42-00		1	Jun01/04
57-42-00		2	Jun01/92
57-42-00		3	Jun01/04
57-42-00		4	Jun01/04
57-43-00		1	Jun01/04
57-43-00		2	Dec01/90
57-44-00		1	Jun01/04
57-44-00		2	Dec01/90
57-44-00		3	Jun01/91
57-44-13	D	401	
57-44-13	D	402	
57-44-13	D	403	
57-45-00		1	Jun01/04
57-45-00		2	Dec01/90
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57-45-00		4	Jun01/91
57-45-11	R	401	Jun01/10
57-45-11	R	402	Jun01/10
57-45-11	R	403	Jun01/10
57-45-11	R	404	Jun01/10
57-45-11	R	405	Jun01/10
57-45-11		406	Dec01/90
57-45-11		407	Dec01/90
57-45-11		408	Dec01/90
57-50-00		1	Dec01/90
57-50-00		2	Dec01/90

CH/SE/SU	C	PAGE	DATE
57-51-00		1	Dec01/90
57-51-00		2	Dec01/90
57-51-00		3	Dec01/90
57-51-00		4	Dec01/90
57-51-12		401	Dec01/90
57-51-12		402	Dec01/90
57-51-12		403	Dec01/90
57-51-34	N	401	Jun01/10
57-51-34	N	402	Jun01/10
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57-51-34		616	Dec01/90
57-51-34		617	Dec01/90
57-51-34		618	Dec01/90
57-51-34		619	Dec01/90
57-51-34		620	Dec01/90
57-51-34		621	Dec01/90
57-52-00		1	Dec01/90
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57-53-00		2	Dec01/90
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57-61-00		1	Dec01/90
57-61-00		2	Dec01/90
57-70-00		1	Dec01/90
57-70-00		2	Dec01/90
57-71-00		1	Dec01/90
57-71-00		2	Dec01/90
57-72-00		1	Dec01/90
57-72-00		2	Dec01/90
57-73-00		1	Dec01/92
57-73-00		2	Dec01/92
57-75-00		1	Dec01/92
57-75-00		2	Dec01/92
57-76-00		1	Dec01/92
57-76-00		2	Dec01/92

CHAPTER 57

WINGS

TABLE OF CONTENTS

SUBJECT	CH/SE/SU	C	PAGE	EFFECTIVITY
WINGS	57-00-00			
Description			1	ALL
Wing Main Data			3	ALL
Movable Control Surfaces			3	ALL
Control Surface Areas			7	ALL
High Lift Surface Areas			7	ALL
Material			8	ALL
Protection			8	ALL
Fuel Tank Sealing			9	ALL
Wing Panels - Composite Construction			9	ALL
Inspection/Check			601	ALL
CENTER WING	57-10-00			
Description			1	ALL
Cleaning/Painting			701	ALL
Location			701	ALL
OUTER WING	57-20-00			
Description			1	ALL
SKINS AND PLATING	57-20-12			
Inspection/Check			601	ALL
Cleaning/Painting			701	ALL
Renew Abrasion Resistant Coating			701	ALL
Approved Repair			801	ALL
BEAMS	57-20-24			
Removal/Installation			401	ALL
Flap Track/Beam 1			403	ALL
Flap Track/Beam 2			406	ALL
Flap Track/Beams 3 thru 5			406	ALL
Inspection/Check			601	ALL
Flap Track/Beams 1 thru 5			602	ALL
Gap at Aft Mounting of Flap Track/Beams 2 thru 5			602	ALL
RAM AIR TURBINE - YOKE ATTACHMENT FITTING	57-20-28			
Removal/Installation			401	ALL
SPHERICAL BEARING - PYLON TO WING AFT ATTACHMENT	57-20-34			
Removal/Installation			401	ALL
Inspection/Check			601	ALL
Main Gear - Visual			601	ALL
Main Gear - Fits and Clearances			601	ALL
Flap Track Beam 2 thru 5 - Fits and Clearances			601	ALL
Flap Track Fairing (Fixed) 2 thru 5 - Fits and Clearances			601	ALL
Pylon to Wing - Fits and Clearances			601	ALL

Printed in France

SUBJECT	CH/SE/SU	C	PAGE	EFFECTIVITY
FILLETS AND FAIRINGS	57-20-35			
FLAP TRACK FIXED FAIRINGS			401	ALL
Removal/Installation			401	ALL
WING JACKING-POINT			405	ALL
FAIRING 575EB (675EB)				
Removal/Installation			405	ALL
Inspection/Check			601	ALL
Pencil Hardness Test			601	ALL
Corrosion Pressure Test			605	ALL
Cleaning			701	ALL
General Cleaning			702	ALL
Cleaning Non Damaged Areas			702	ALL
Pre-bond Cleaning/			703	ALL
Check of Surface Cleanliness				
Water Break Test			704	ALL
Dry the Fairing			704	ALL
ACCESS PANELS/DOORS	57-20-41			
Removal/Installation			401	ALL
Panel 550(650)AT (over fuel pumps)			401	ALL
TRACK CANISTERS AND SCREW-JACK CANISTERS	57-23-11			
Removal/Installation			401	ALL
DAMPER ASSEMBLY	57-25-17			
Removal/Installation			401	ALL
Inspection/Check			601	ALL
WING TIP	57-30-00			
Description and Operation			1	ALL
WING TIP	57-30-11			
Removal/Installation			401	ALL
Inspection/Check			601	ALL
Cleaning/Painting			701	ALL
Clean Forward Lights Panel.			701	ALL
Approved Repairs			801	ALL
Renew lens/transparent cover			801	ALL
Deactivation/Reactivation			901	ALL
Ref CDL 6.03.57 Chap 57 Item 01			901	ALL
LEADING EDGE AND LEADING EDGE DEVICES	57-40-00			
Description			1	ALL
LEADING EDGE	57-41-00			
Description			1	ALL
SLEEVE - SPIGOT, PYLON TO WING	57-41-28			
Removal/Installation			401	ALL
LEADING EDGE ATTACHED FITTINGS	57-41-34			
Inspection/Check			601	ALL
SLAT 1	57-42-00			
Description			1	ALL

SUBJECT	CH/SE/SU	C	PAGE	EFFECTIVITY
SLAT 2	57-43-00			
Description			1	ALL
SLAT 3	57-44-00			
Description			1	ALL
KRUEGER FLAP	57-45-00			
Description			1	ALL
KRUEGER FLAP AND BOX -STRUCTURE COMPLETE	57-45-11			
Removal/Installation			401	ALL
TRAILING EDGE AND TRAILING EDGE DEVICES	57-50-00			
Description			1	ALL
TRAILING EDGE	57-51-00			
Description			1	ALL
TRAILING EDGE - SKINS AND PLATING	57-51-12			
Removal/Installation			401	ALL
Aileron Brush Seal - Replacement			401	ALL
ALL SPEED AILERON ATTACHMENT	57-51-34			
Removal/Installation			401	ALL
Inspection/Check			601	ALL
Aileron Hinge Attach Fittings			601	ALL
Spoiler 1 thru 7 Hinge Attach Fittings				
INBOARD FLAP	57-52-00			
Description			1	ALL
OUTBOARD FLAP	57-53-00			
Description			1	ALL
AILERONS	57-60-00			
Description			1	ALL
ALL SPEED AILERON	57-61-00			
Description			1	ALL
SPOILERS AND SPEEDBRAKES	57-70-00			
Description			1	ALL
SPOILER 1	57-71-00			
Description			1	ALL
SPOILER 2	57-72-00			
Description			1	ALL
SPOILERS 3 AND 4	57-73-00			
Description			1	ALL
SPOILER 5	57-75-00			
Description			1	ALL

Printed in France

SUBJECT	CH/SE/SU	C	PAGE	EFFECTIVITY
SPOILERS 6 AND 7	57-76-00			
Description			1	ALL

1. General

(Ref. Fig. 001)

The wing comprises three main components; two outer wings joined at the side of the fuselage to a center box, which is built integrally with, and passes through the fuselage. Primary structure is load carrying box type constructions, the center box forming an integral fuel tank and each outer wing forming two integral fuel tanks. The primary sealing of the fuel tanks is achieved in the structural joints by the application of poly-sulphide interfay sealants which are resistant to all approved fuels and additives.

The auxiliary structure of the outer wings comprises leading and trailing edges, removable wing tip and flap beams. The flap beams incorporate tracks on which carriages and rollers are mounted to provide flap movement.

Movable flight surfaces on the wing comprise:-

- Inner flaps and vane and outer flaps at the trailing edge.
- Spoilers on the upper surface forward of the flaps.
- All speed aileron behind the engine pylon.
- Slats at the leading edge.
- A Krueger flap located inboard of the slats.

2. Component Location

(Ref. Fig. 002)

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF
	CENTER WING		141/142		57-10-00
	MANHOLE COVERS - CENTER WING		147/148	147/148-AZ	57-10-00
	ACCESS PANELS - CENTER WING		147/148	734/744	57-10-00
	OUTER WING		500/600		57-20-00
	MANHOLE COVERS - OUTER WING		500/600		57-20-00
	ACCESS PANELS - OUTER WING		500/600		57-20-00
	OVERWING PANEL		571/671		57-20-00
	SHROUD BOX		572/672		57-20-00
	OVERWING REFUELLING CAP INNER		540/640	540/640-AT	57-20-00
	OVERWING REFUELLING CAP OUTER		550/650	550/650-BT	57-20-00
	WING TIP		531/		57-30-00

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF
	CENTER WING		141/631		57-10-00
	LEADING EDGE		512/612 523/623 524/624		57-41-00
	SLAT 1		511/611		57-42-00
	SLAT 2		521/621		57-43-00
	SLAT 3		522/622		57-44-00
	KREUGER FLAP		513/613		57-45-00
	FLAP TRACK BEAM 1		577/677		57-50-00
	FLAP TRACK BEAM 2		532/632		57-50-00
	FLAP TRACK BEAM 3		533/633		57-50-00
	FLAP TRACK BEAM 4		534/634		57-50-00
	FLAP TRACK BEAM 5		535/635		57-50-00
	FLAP TRACK FAIRING 2		532/632		57-50-00
	FLAP TRACK FAIRING 3		533/633		57-50-00
	FLAP TRACK FAIRING 4		534/634		57-50-00
	FLAP TRACK FAIRING 5		535/635		57-50-00
	TRAILING EDGE		572/672 575/675 581/681 591/691		57-51-00
	INBOARD FLAP AND VANE		574/674		57-52-00
	OUTBOARD FLAP		587/687		57-53-00
	ALL SPEED AILERON		576/676		57-61-00

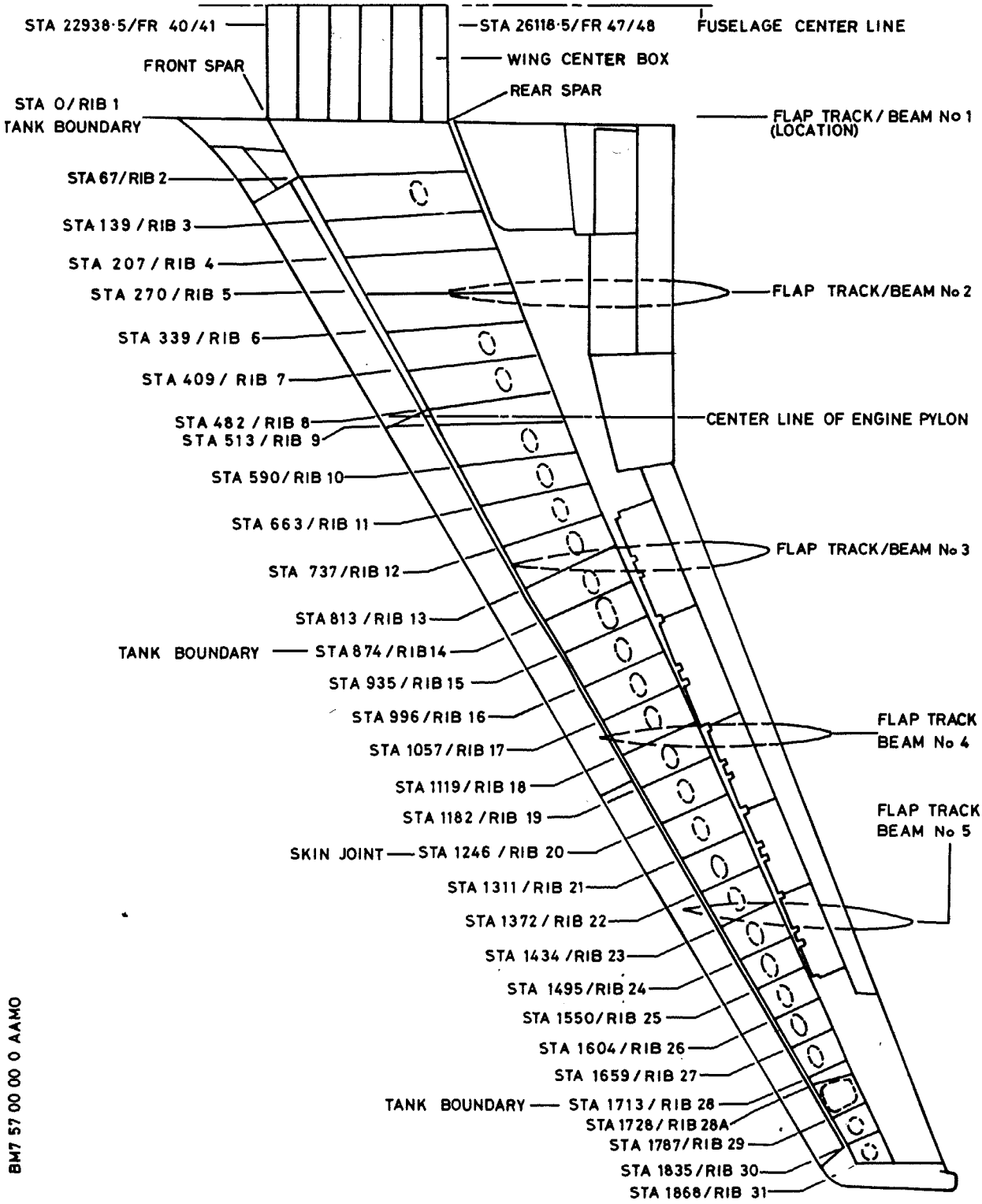
FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF
	CENTER WING		141/		57-10-00
	SPOILER 1		573/ 673		57-71-00
	SPOILER 2		578/ 678		57-72-00
	SPOILER 3		582/ 682		57-73-00
	SPOILER 4		583/ 683		57-73-00
	SPOILER 5		584/ 684		57-75-00
	SPOILER 6		585/ 685		57-76-00
	SPOILER 7		586/ 686		57-76-00

3. Wing Main Data
(Ref. Fig. 003)

Wing reference area	219.0 sq.m (2357 sq.ft)
Aerodynamic mean chord (AMC)...	5.8287 m (19.12 ft.)
Geometric mean chord (GMC)	4.9886m (16.36 ft.)
Span...	43.8996m (144.02 ft.)
Root chord...	8.3812m (27.5 ft.)
Kink chord...	4.9462m (16.22 ft.)
Tip chord	2.1751m (7.13 ft.)
Aspect ratio	8.8
Taper ratio (tip chord/root chord)... ...	0.2595
Sweep angle (25%)	27.9740°
Root-wing setting	5° 3'
Dihedral of trailing edge at wing root ...	3.9638°
Dihedral of trailing edge at kink	4° 3'
Relative thickness root/kink/tip	15.2%, 11.8%, 10.8%

4. Movable Control Surface per Wing-half (Ref. Fig. 002)
Leading edge
- Slats 1, 2 and 3
- Krueger flap (inboard of slats)

Trailing edge
- All speed ailerons
- Spoilers 1 and 2; 3 and 4; 5, 6 and 7
- Inboard and outboard flaps



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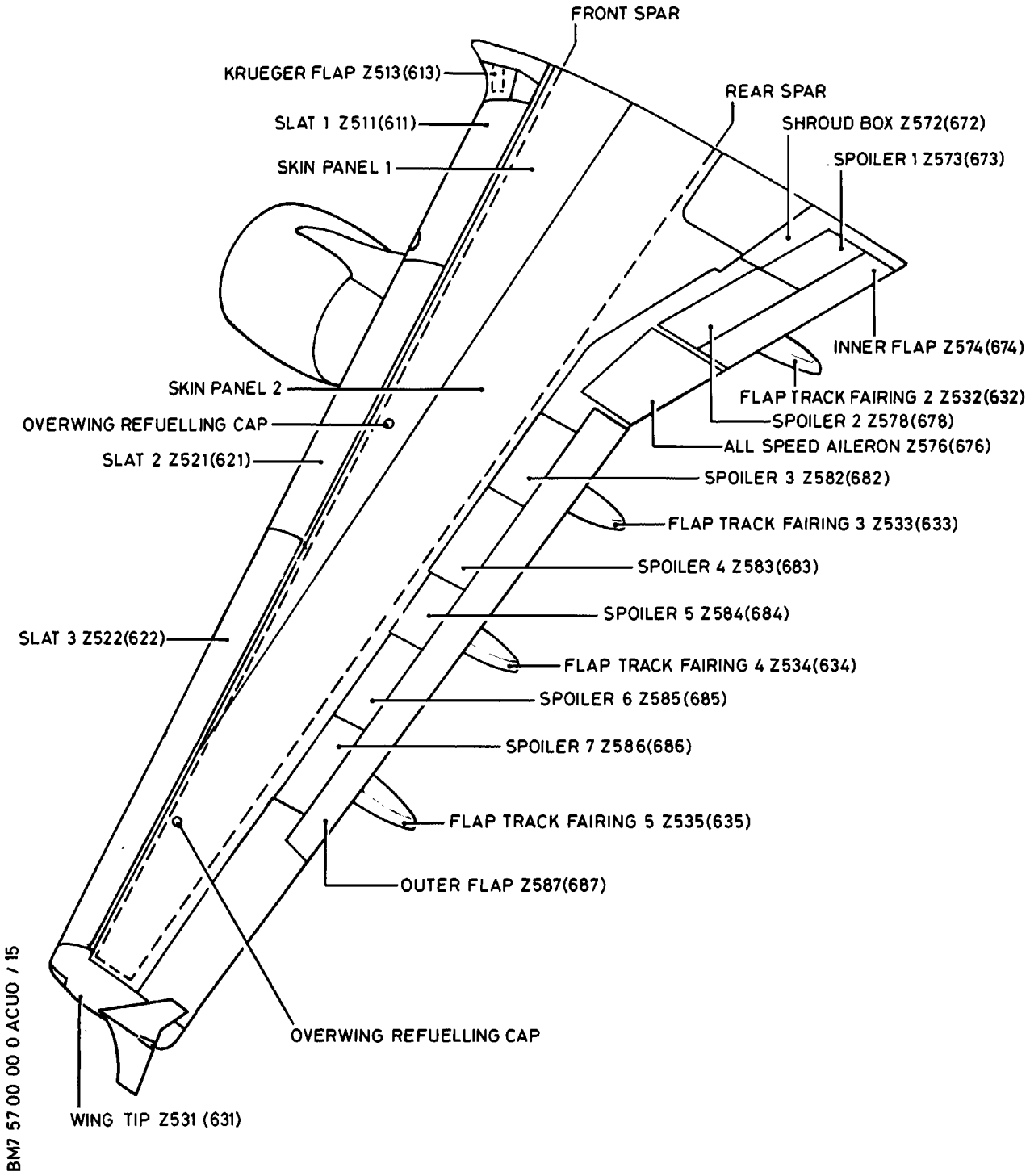
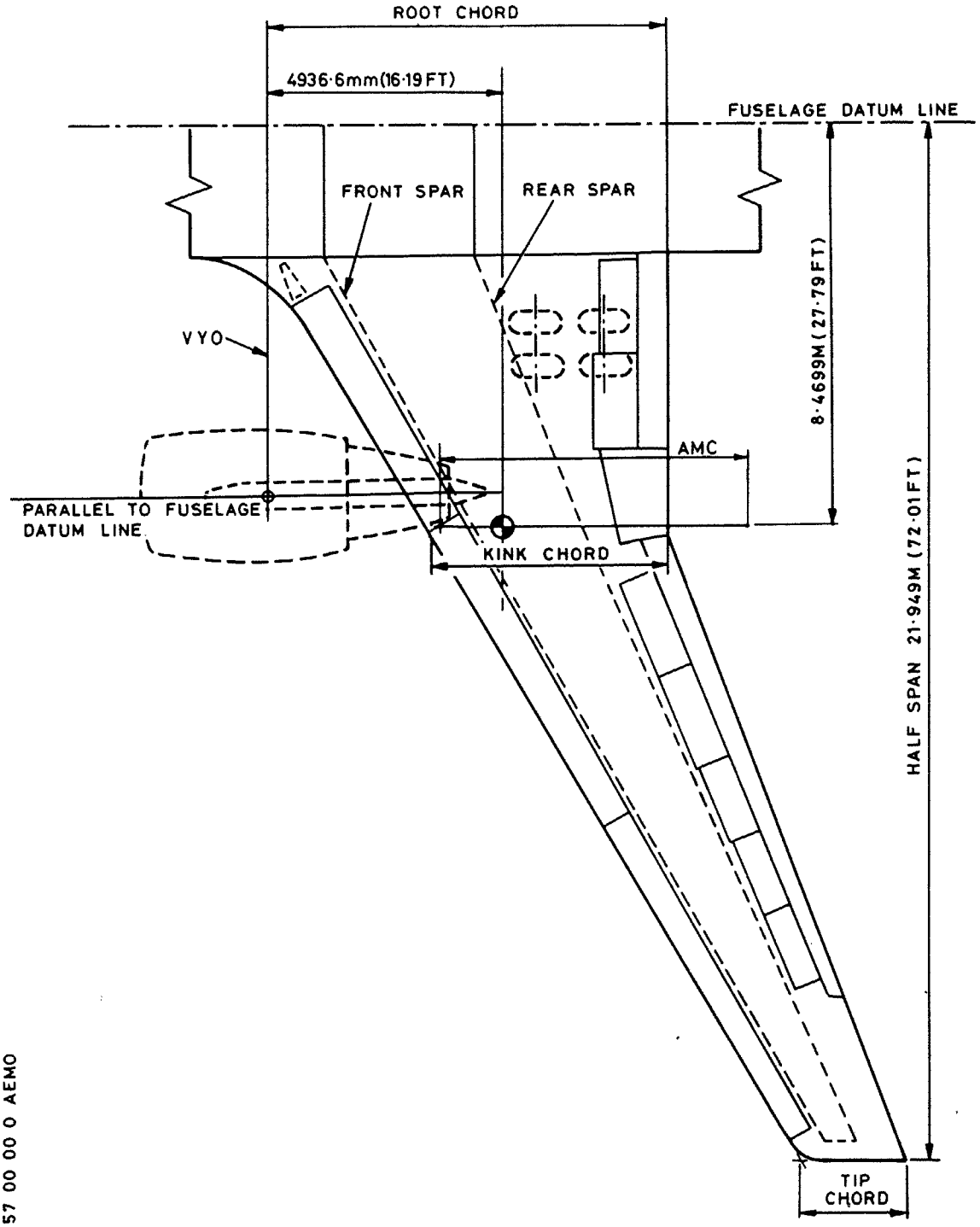
General Arrangement
Figure 001



Wings - Component Location
Figure 002



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Wing Geometry
Figure 003

5. Control Surface Areas

All Speed aileron	2.526 sq.m (27.19 sq.ft.)
Spoiler 1	1.410 sq.m (15.17 sq.ft.)
Spoiler 2	1.710 sq.m (18.4 sq.ft.)
Spoiler 3	1.541 sq.m (16.59 sq.ft.)
Spoiler 4	1.541 sq.m (16.59 sq.ft.)
Spoiler 5	1.097 sq.m (11.8 sq.ft.)
Spoiler 6	1.013 sq.m (10.9 sq.ft.)
Spoiler 7	1.013 sq.m (10.9 sq.ft.)

NOTE: Refer to Chapter 27 for surface deflections.

6. High Lift Surface Areas

Leading Edge Slats	
Slat 1	3.82 sq.m (41.12 sq.ft.)
Slat 2	5.78 sq.m (62.21 sq.ft.)
Slat 3	4.67 sq.m (50.27 sq.ft.)
Flaps	
Inboard	7.852 sq.m (84.5 sq.ft.)
Outboard	11.30 sq.m (121.63 sq.ft.)

NOTE: Refer to Chapter 27 for surface deflections.

7. Material

Location	Material	Treatment
Outer Wing - Main Box Structure		
Top skin panels	7075	T.651
Top stringers	7075	T.651
Bottom skin panels	2024	T.351
Bottom stringers	2024	T.351
Front and rear spars	7010 or 7050	T.7651
Ribs and aluminum fittings (general)	7010 or 7050	T.7651
Skin panel joint straps - top	7010 or 7050	T.7651
Skin panel joint straps - bottom	2024	T.351
Pylon attachment fittings	Titanium	-
Aluminum alloy fittings (forged)	2014	T.6 (Hot water quench)
Movable Surfaces		
General application	2024	T4 clad
Non fatigue critical areas	7075	T6 clad
Hot air inlet canals	5052	
Slat 2 (outer), slat 3	2618(*)	T.651
Inboard Flaps		
Skins	2024	T.42
Stringers	2024	T.42/T3
Spars	7475	T.7351
Ribs (machined)	7075 or 7050	T.7351
Brackets	7075 or TiA16V4	T.7351
Vane tracks	TiA16V4	
Trailing edge core	A1 honeycomb	
Outboard Flaps		
Skins	2024	T.42
Skin (middle part)	7075	T.42
Spar (main)	7475	T.7351
Spars (front and rear)	7075	T.7351
Ribs (machined)	7075 or 7050	T.7351
Brackets	TiA16V4	
Flap Carriages		
Side plates	TiA16V4	
Center member	7050	T.73651
Roller brackets	TiA16V4 or 17-4PH	

* 2618 material for hot areas only (e.g. ice protection system)

8. Protection (Ref. Fig. 005)

Exterior Surfaces

Chromic acid anodising (aluminum alloys) and epoxy primer (basic protection)

followed by one of the following paint schemes:-
Top and Bottom skins) either Coroguard or wash primer, polyurethane primer and polyurethane finish.

Interior Surfaces
Chromic acid anodising (aluminum alloys) and epoxy primer (basic protection) with a gloss chemical resistant finish in areas subject to hydraulic fluid contamination (no gloss finish used inside fuel tanks).

9. Fuel Tank Sealing

The figures show the methods used during manufacture to seal the fuel tanks.
(Ref. Fig. 004)
(Ref. Fig. 005)

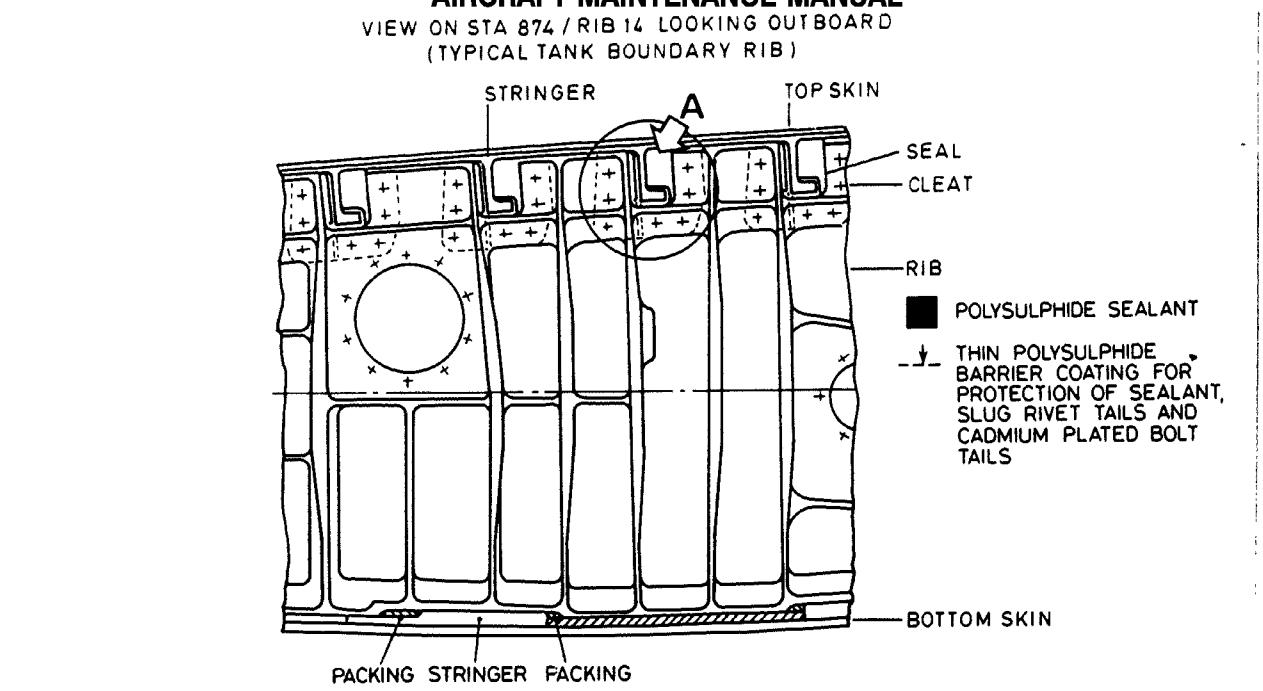
10. Wing Panels - Composite Construction

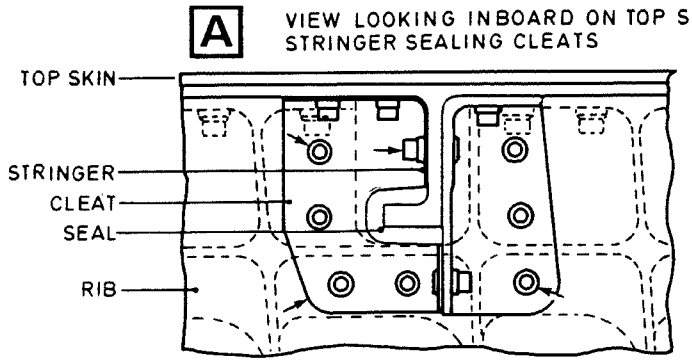
Wing access and fixed panels, of composite structure, are electrically bonded to the wing structure by a layer of aluminium foil on the inner surface of each of the panels. This helps prevent static electricity build-up in the wing structure and provides lightning strike protection.
(Ref. Fig. 006)
(Ref. Fig. 007)

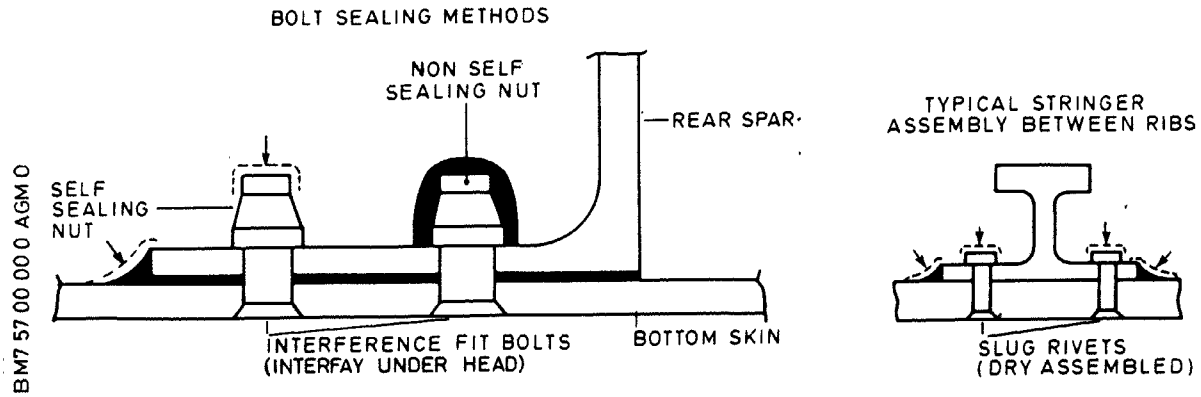
A. Carbon Fiber and Glassfiber Composite Panels (Ref. Fig. 006, 007)
(Ref. Fig. 008)
(Ref. Fig. 009)

Leading edge lower wing surface access panels are similarly constructed of carbon fiber laminates on a metal honeycomb core. The leading edge, trailing edge shroud and aileron shroud upper surface fixed panels are constructed of glassfiber laminates on a metal honeycomb core.
Wing access panels 575(675)BT, CB and DB are constructed of carbon fiber laminates on a metal honeycomb core.

The outer trailing edge consists of a carbon fibre composite structure with honeycomb top and bottom panels.
Electrical bonding between wing structure and each composite panel is made certain by a small area of unpainted aluminum foil which corresponds with a similar unpainted area on the wing structure.

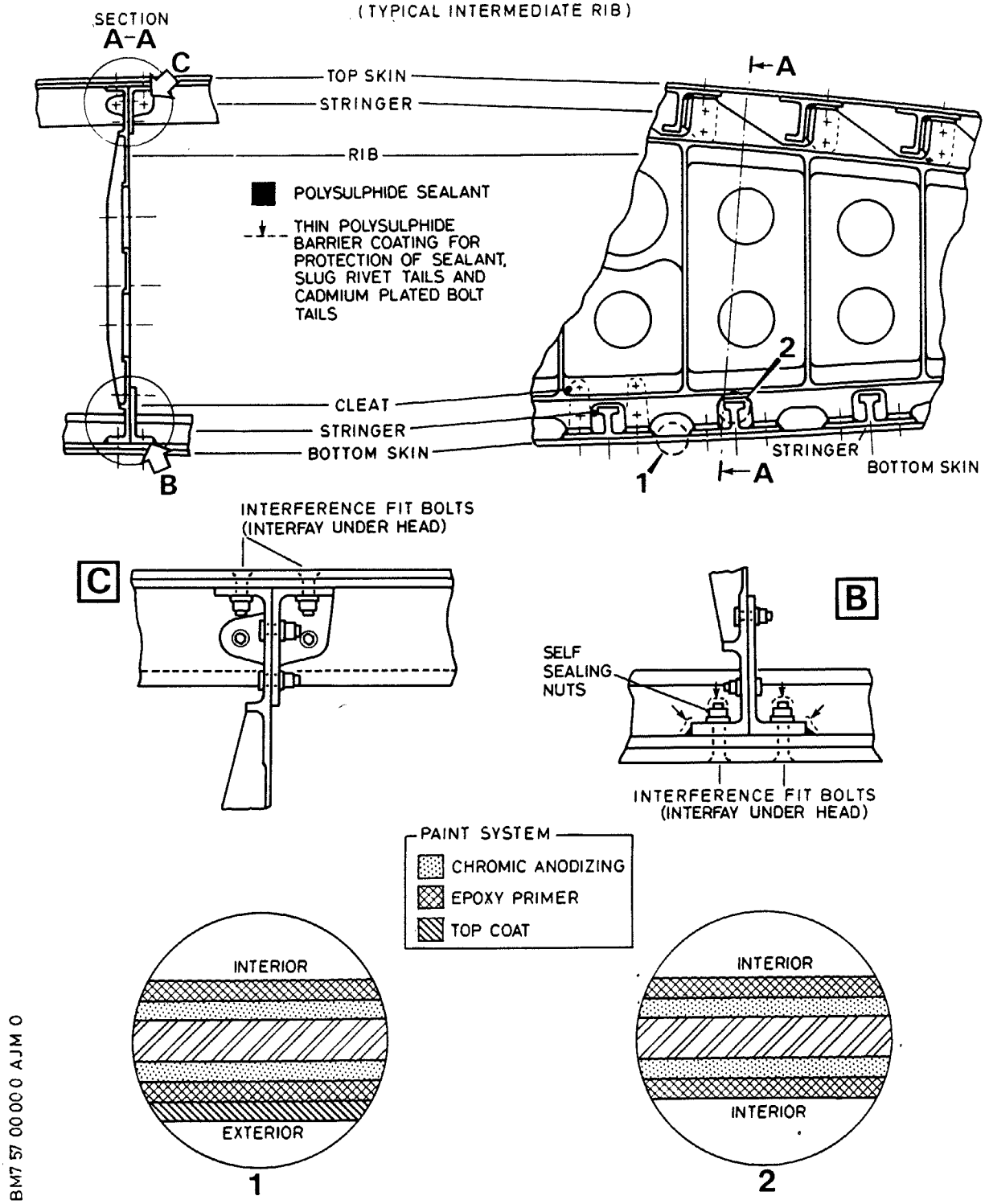





BOLT SEALING METHODS
NON SELF SEALING NUT
REAR SPAR
SELF SEALING NUT
INTERFERENCE FIT BOLTS (INTERFAY UNDER HEAD)
BOTTOM SKIN
TYPICAL STRINGER ASSEMBLY BETWEEN RIBS
SLUG RIVETS (DRY ASSEMBLED)
BM7 57 00 00 0 AGM 0

Fuel Tank Sealing
Figure 004

VIEW ON STA 996/RIB 16 LOOKING INBOARD
(TYPICAL INTERMEDIATE RIB)



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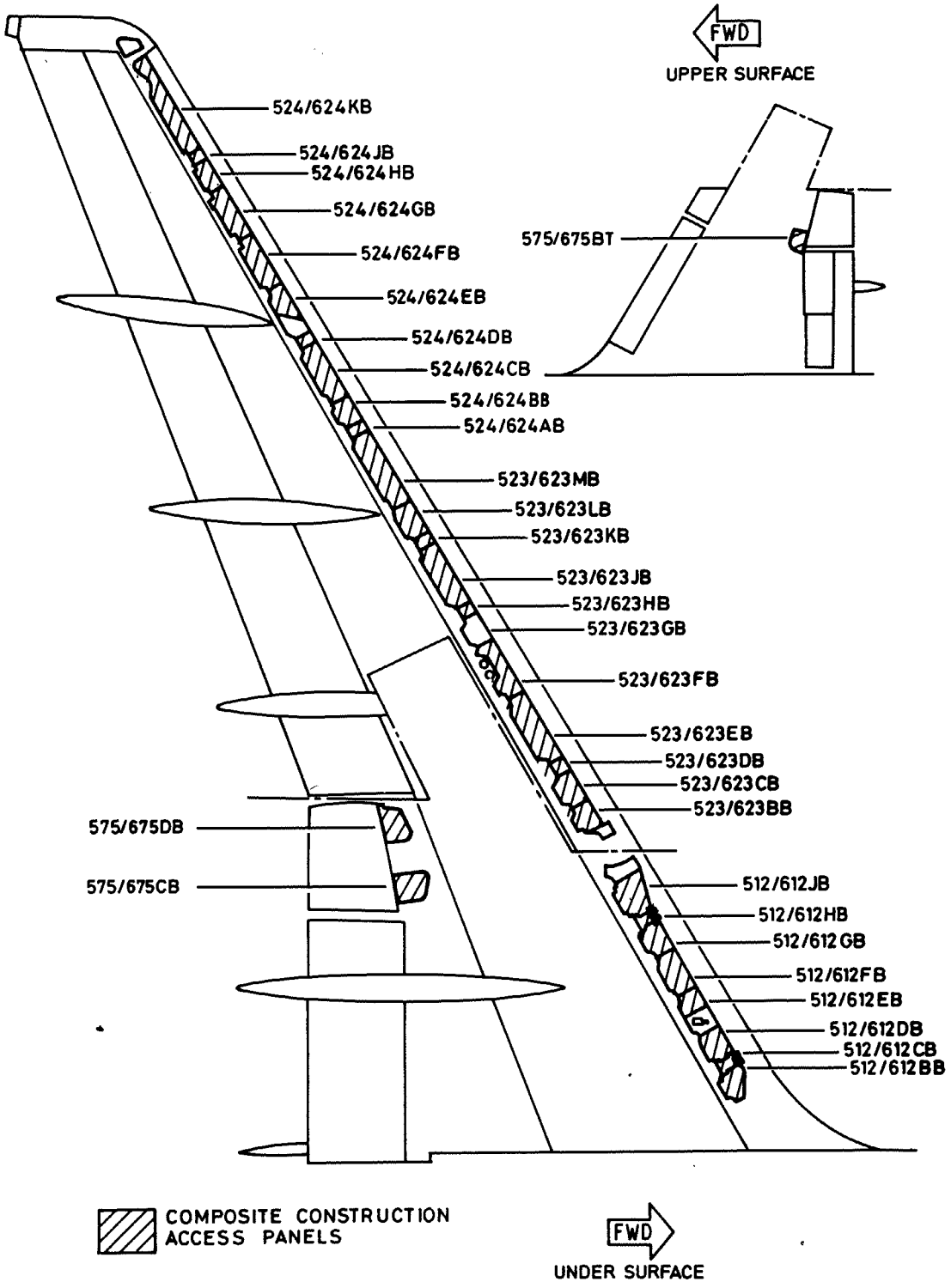
Fuel Tank Sealing
Figure 005



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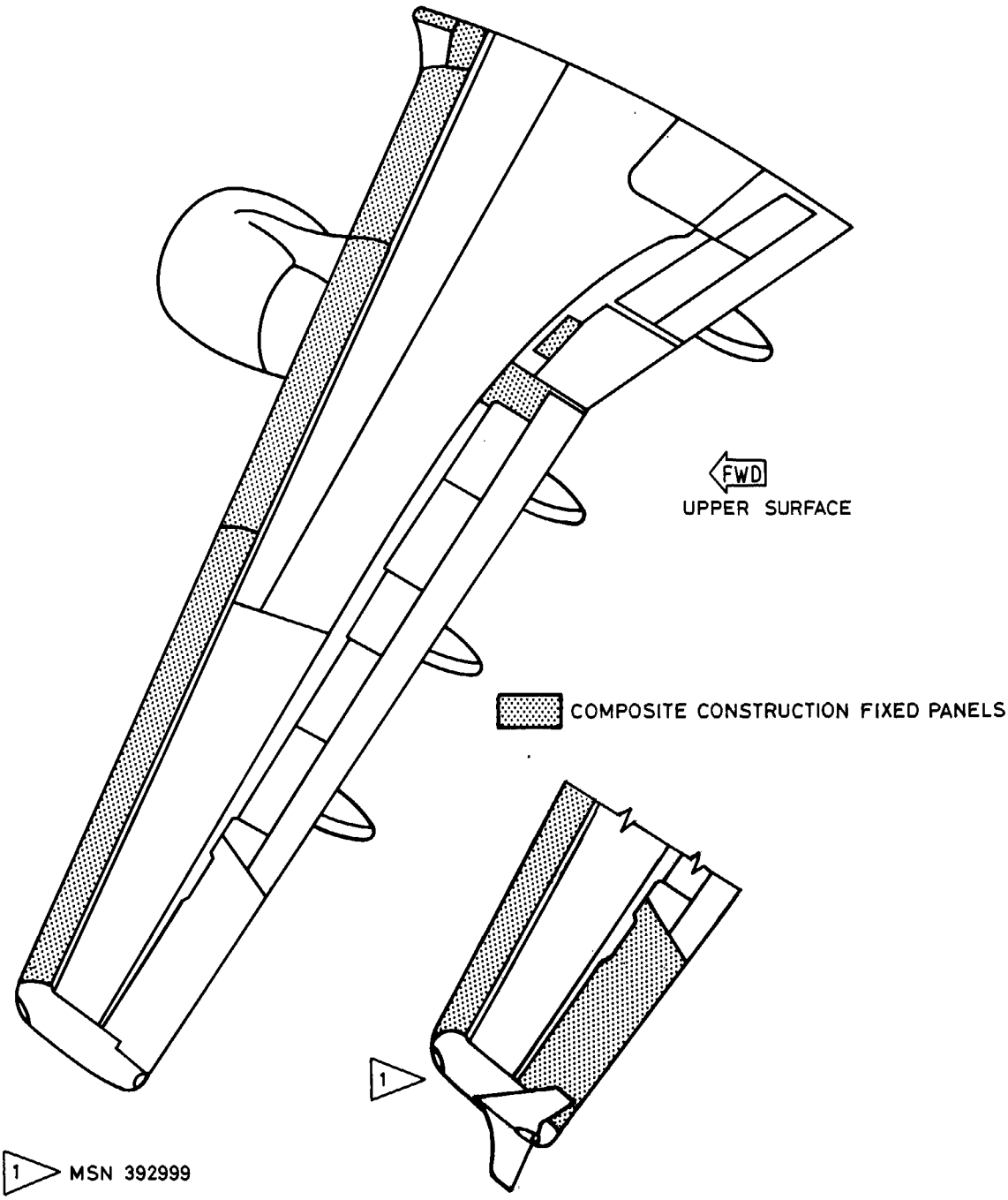
Wings - Composite Construction Fixed Panels
Location
Figure 006



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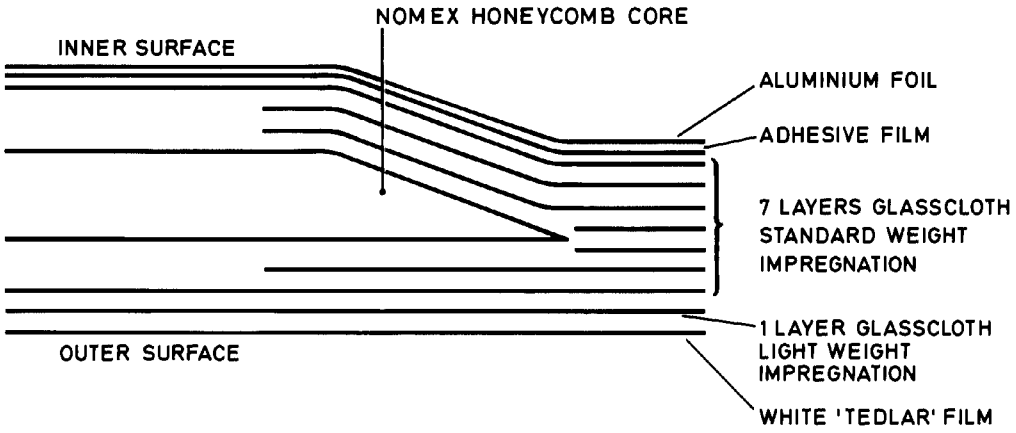
Wings - Composite Construction Access Panels
Location
Figure 007



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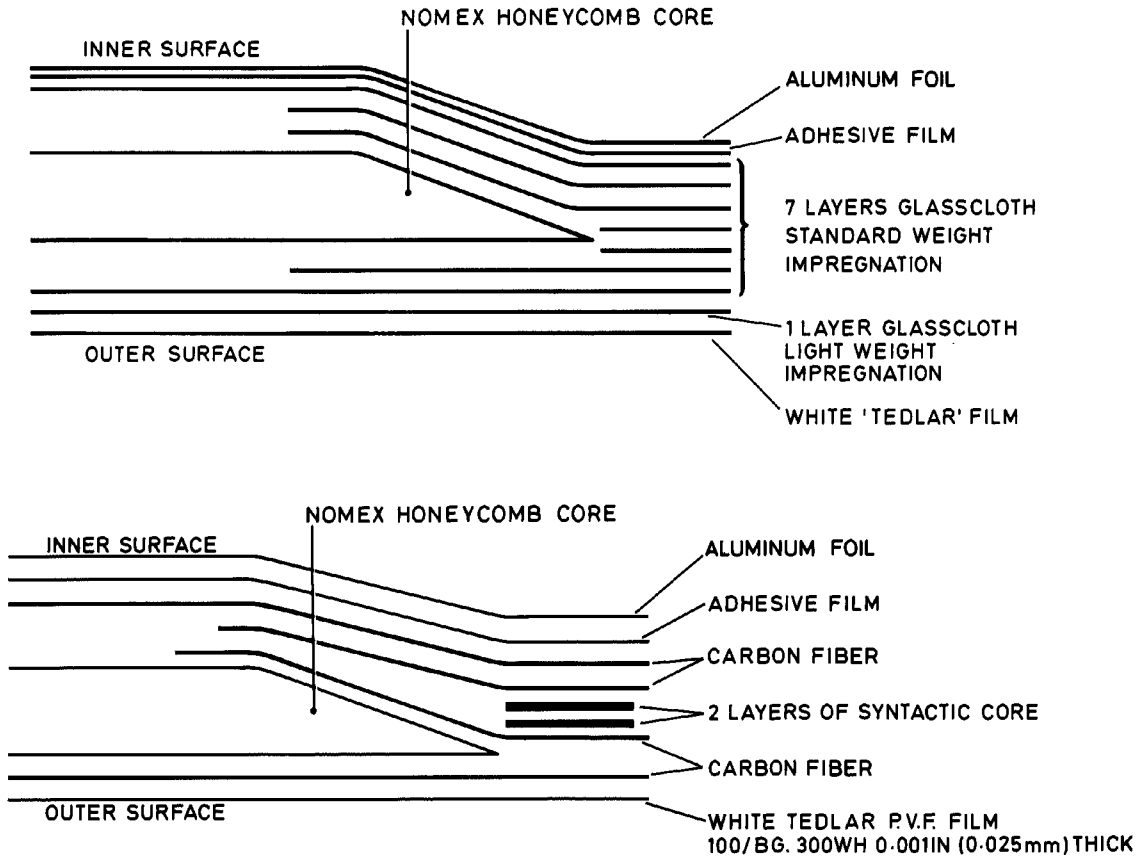
Glassfiber Panel - Construction Detail
Figure 008



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Carbon Fiber Panel - Construction Detail
Figure 009

WARNING : LANDING GEAR - MAKE CERTAIN GROUND SAFETIES AND WHEEL CHOCKS ARE IN POSITION.

HYDRAULIC POWER - BEFORE APPLYING OR RELIEVING HYDRAULIC SYSTEM PRESSURE MAKE CERTAIN THAT TRAVEL RANGES ARE CLEAR AND THAT CONTROLS MATCH SURFACE POSITION.

BEFORE PRESSURIZING HYDRAULIC SYSTEMS CHECK THAT ALL CONTROLS ARE SET TO CORRESPOND WITH THE ACTUAL POSITION OF THE SERVICES THEY OPERATE.

BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

1. Visual Inspection

A. Equipment and Materials
Not applicable.

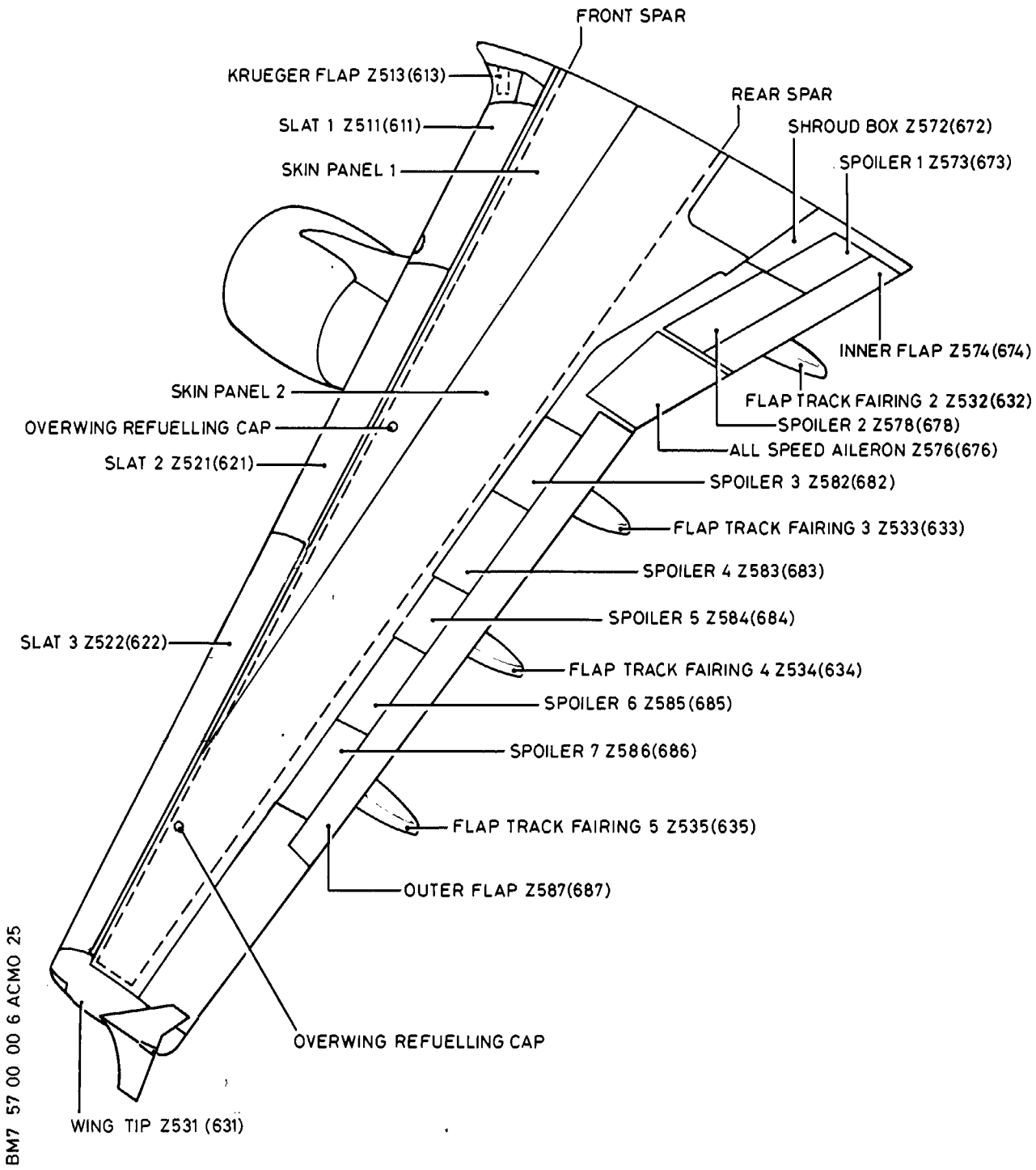
ITEM	DESIGNATION
Referenced Procedures	
- 51-23-20, P. Block 1	Special Coatings
- 51-75-10, P. Block 801	Paint Coatings

B. Procedure
(1)Job set-up
Not applicable.

(2)Procedure
(Ref. Fig. 601)
(a)Inspect wing exterior, including flaps, slats, spoilers, air brakes and ailerons as visible from the ground and through cabin windows.
(b)Check visually for damage, evidence of fuel leakage, cracks, corrosion and paint condition.
(c)Check visually, all composite structure for damage, evidence of cracks and paint condition.

CAUTION : MAKE CERTAIN THAT PAINT COATING OF COMPOSITE STRUCTURE IS RESTORED, IF DAMAGED, TO PREVENT FURTHER DETERIORATION (REF. 51-23-20, P. BLOCK 1, 51-75-10, P. BLOCK 801).

(d)Check exterior light covers for cleanliness and freedom from damage or crazing.
(3)Close-up
Not applicable.



Wings - Component Location
Figure 601

2. Detailed Inspection

A. Equipment and Materials

ITEM	DESIGNATION
	Access Platform 1.5 to 6.0 mm (5 to 19 ft. 8 in.)
Referenced Procedures	
- 51-23-20, P. Block 1	Special Coatings
- 51-75-10, P. Block 801	Paint Coatings

B. Procedure

(1)Job set-up

(a)Position access platform.

(2)Procedure (Ref. Fig. 601)

(a)Inspect wing upper and lower surfaces including flaps, slats, spoilers, air brakes and ailerons.

(b)Check for deterioration of protective treatment.

(c)Examine all composite structure for damage, evidence of cracks and paint condition.

(d)Examine wing upper and lower surfaces for damage and evidence of fuel leakage.

CAUTION : MAKE CERTAIN THAT PAINT COATING OF COMPOSITE STRUCTURE IS RESTORED, IF DAMAGED, TO PREVENT FURTHER DETERIORATION (REF. 51-23-20, P. BLOCK 1, 51-75-10, P. BLOCK 801).

R (e)Check legibility of mandatory markings.

R (f)Check ailerons, flaps, spoilers, slats and slat seals and airbrakes for damage and evidence of fouling.

R (g)Check flying control surfaces hinges for security and any evidence of distortion or cracks.

(3)Close-up

(a)Remove access platform.

CENTER WING - DESCRIPTION AND OPERATION

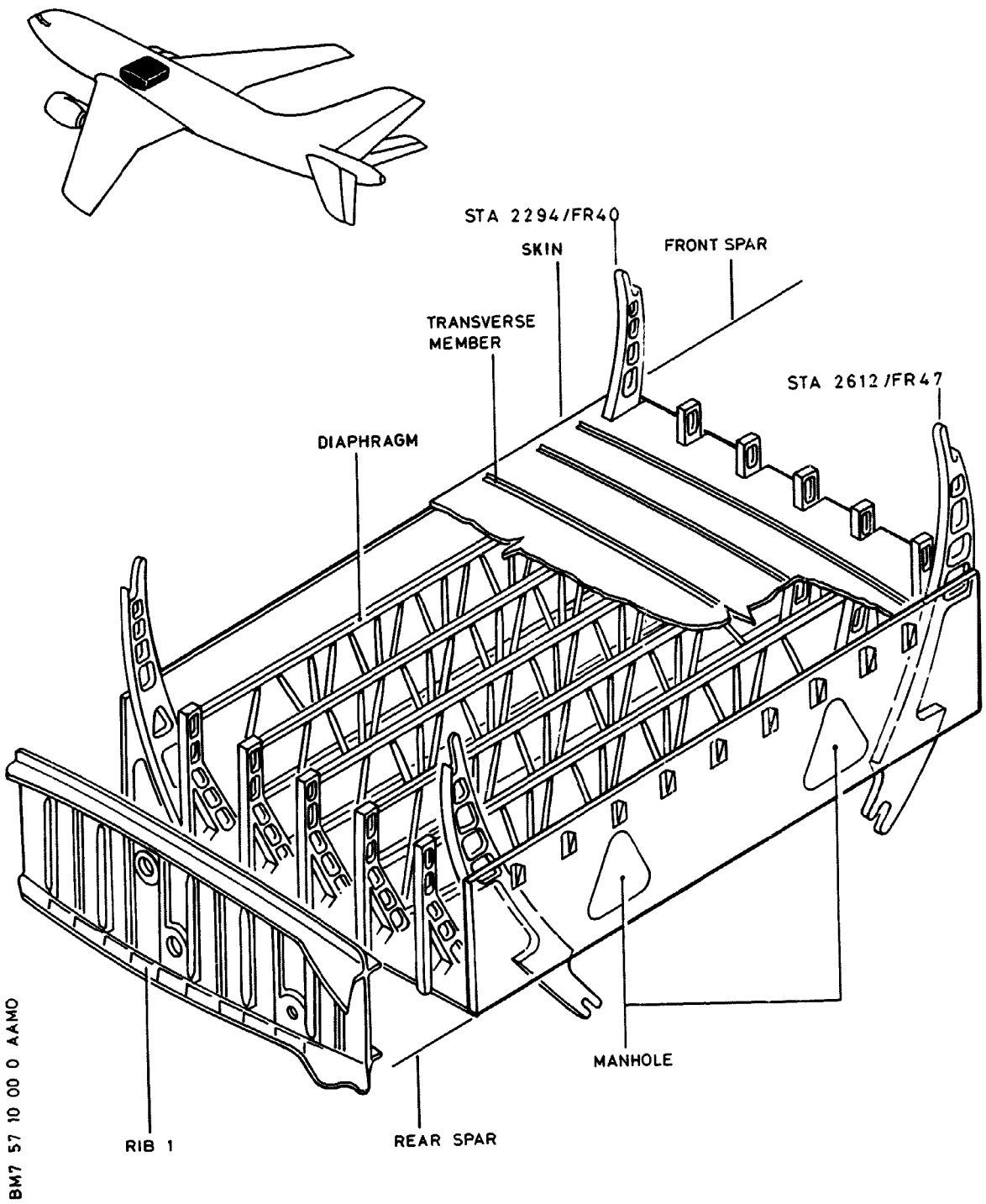
1. General

(Ref. Fig. 001)

The center wing box forms an integral fuel tank, connects the two outer wings and transmits their loads into the fuselage. The primary structure of the box comprises front and rear spars, and top and bottom skins, providing continuity for the adjacent members in the outer wings. Two root ribs close the sides of the box. Access to the box is provided in the rear spar by two manholes with load carrying surrounds and closed with sealed covers.

Inside the box structure are five diaphragms; spaced between the diaphragms are extruded stiffeners attached to the top and bottom skins. Externally the skins are stabilized by a series of tranverse members. The nine lower members support a vapor seal for the center tank and nine upper members support the cabin floor panels and the longitudinal seat track support members.

For further structural details of the center wing refer to Chapter 53-15-00.



Center Wing Box Structure
Figure 001

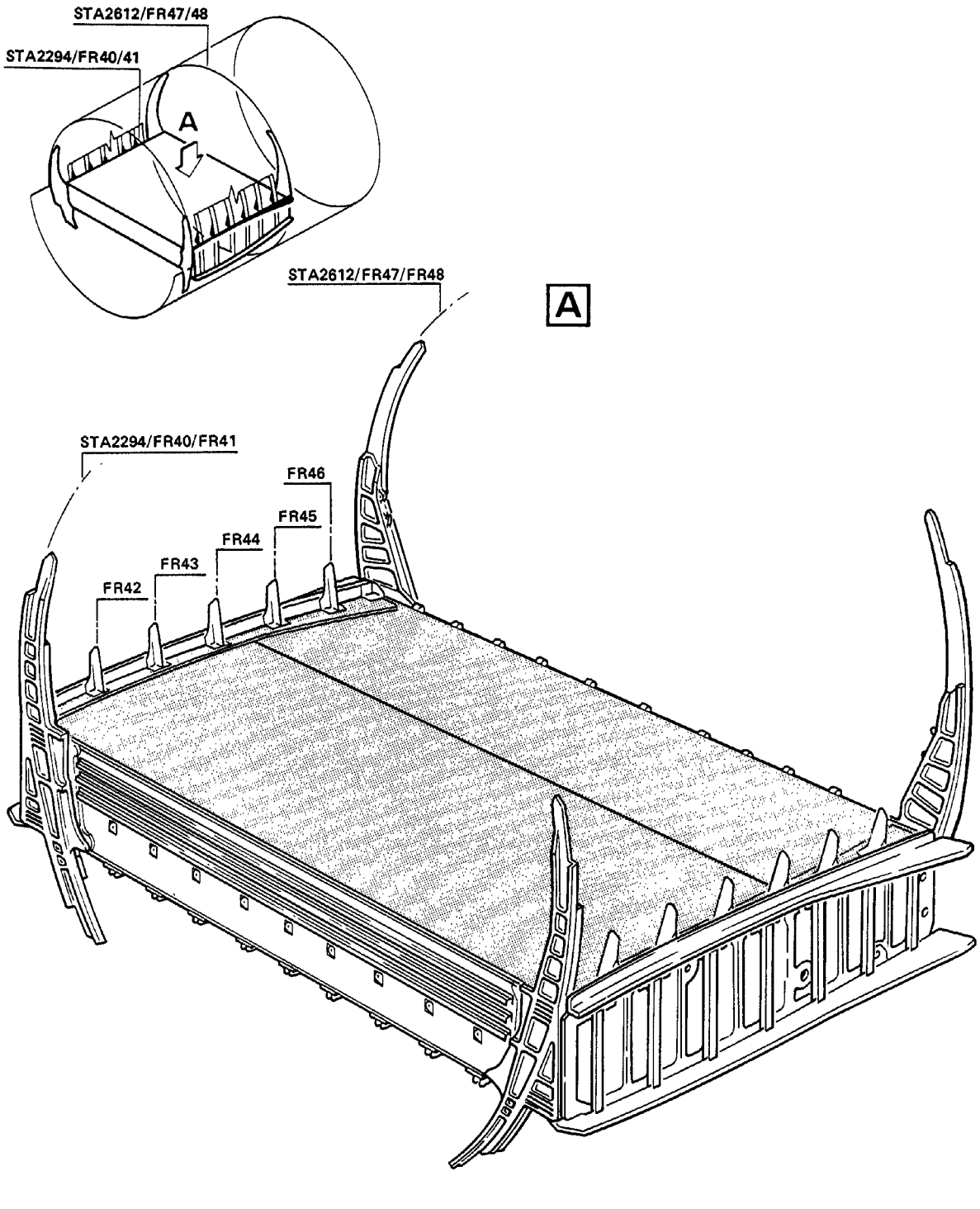
1. Location
Upper surface of wing center box upper panel.

A. Reason for the job
(1)Repair to improve protection of wing center box panel.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Adhesive tape
(2)	Abrasive Paper Grade 320
(3)Material No. 11-001	Cleaning Agents (Ref. 20-31-00)
(4)Material No. 11-004	Cleaning Agents (Ref. 20-31-00)
(5)Material No. 12-005	Strippers (Ref. 20-31-00)
(6)Material No. 16-001	Structure Paints (Ref. 20-31-00)
(7)Material No. 16-015	Structure Paints (Ref. 20-31-00)
(8)Material No. 16-020	Structure Paints (Ref. 20-31-00)
(9)	Plexiglass Spatula
10)	Brush
Referenced Procedures	
- 12-15-38, P. Block 1	Portable Water
- 12-24-38, P. Block 1	Potable Water System Draining
- 25-21-00, P. Block 401	Passenger Seats
- 25-28-11, P. Block 401	Floor Covering Carpet
- 25-28-12, P. Block 401	PVC/GRP - Floor Covering
- 28-00-00, P. Block 401	Fuel Lines Connections
- 36-12-00, P. Block 401	APU Bleed Air Supply System

C. Procedure
(Ref. Fig. 701)
(1)Removal
(a)Remove passenger seats (Ref. 25-21-00, P. Block 401)
(b)Remove floor covering (Ref. 25-28-11, P. Block 401)
(c)Remove PVC/GRP floor panels (Ref. 25-28-12, P. Block 401).
(2)If necessary remove components in working area
(a)Removal of water line
1 Drain the potable water system (Ref. 12-24-38, P. Block 1).
2 Open, safety and tag circuit breakers 1MA and 2MA.
3 Remove potable water line (Ref. 12-15-38, P. Block 1).
(b)Removal of fuel line (Ref. 28-00-00, P. Block 401).
(c)Removal of APU air ducts (Ref. 36-12-00, P. Block 401).
(3)Preparation of replacement component
WARNING : SINCE ALL MATERIALS ARE FLAMMABLE AND SOLVENT BASED, TAKE ALL NECESSARY PRECAUTIONS TO PREVENT FIRE.
- PROVIDE ADEQUATE VENTILATION WHEN HANDLING MATERIALS.
- AVOID SKIN CONTACT.
(a)Carefully protect those areas which are not to be painted.
(b)Surround area to be painted with adhesive tape.



Center Wing
Figure 701

(c)Coat area to be painted with stripper No. 12-005 and leave to take effect.
(d)Remove deteriorated with plexiglass spatula.
(e)Remove adhesive tape and remove loose material down to hard substrate.
(f)Clean with material No. 11-001.
(g)Rub down area to be painted with abrasive paper grade 320.
(h)Clean with material No. 11-004.
(j)Apply coat of material 16-020 and leave to dry for between 1 and 24 hours at ambient temperature.
(k)Apply layer of material 16-001 and leave to dry for between 4 and 24 hours at ambient temperature.
CAUTION : DO NOT ALLOW FUEL ANTI-VAPOR PAINT TO COME INTO CONTACT WITH EXISTING FINISH PAINT. PRIMER PAINT TO BE APPLIED BEFORE FUEL ANTI-VAPOR PAINT SHALL EXTEND BEYOND APPLICATION AREA.

(4)Painting
(a)With a brush, apply first coat of material No. 16-015 and leave to dry for 24 hours at ambient temperature.
NOTE : Final thickness of dry paint must be between 0.3 and 0.4 mm (0.011 and 0.015 in.).

(5)Installation
(a)Installation of APU air duct (Ref. 36-12-00, P. Block 401).
(b)Installation of fuel line (Ref. 28-00-00, P. Block 401).
(c)Installation of water line.
1 Replenish water system (Ref. 12-15-38, P. Block 1).
During replenishing, check connected lines for leakage.
2 Remove safety clips, tags and close circuit breakers 1MA and 2MA.
NOTE : Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(d)Install PVC/GRP floor panels (Ref. 25-28-12, P. Block 401).
(e)Install floor covering (Ref. 25-28-11, P. Block 401).
(f)Install passenger seats (Ref. 25-21-00, P. Block 401).

OUTER WING - DESCRIPTION AND OPERATION

1. General.
(Ref. Fig. 001)

The wing main frame is of aluminum alloy and forms a tapered box structure from the wing root to the tip. The structure comprises machined front and rear spars with 31 machined interspar ribs, machined stringers, and machined skins. The structure between the wing root to STA874(Rib 14) and STA874(Rib 14) to STA1713(Rib 28) forms the inner and outer integral fuel tanks respectively. Between STA1713(Rib 28) and STA1868(Rib 31) is the vent/surge tank.

The front and rear spars comprise inner and outer sections joined at STA590 (Rib 10). Fuel-tight titanium cans are mounted on the inner face of the front-spar to accommodate slat-tracks and operating jacks. Spoiler (3 thru 7) actuators pass through the rear spar into local dry bays.

The wing skins comprise two top and two bottom spanwise joined panels. The skins are reinforced by additional plates at the pylon and main landing gear positions. Manhole and fuel pump apertures are located in the bottom skin panels and fuel pump bay access and overwing refuelling apertures are provided in the top skin panels. The main landing gear forward attachment is mounted on the aft face of the rear spar at STA207 (Rib 4). Extensions of the top and bottom skin panels and a support rib aft of STA270(Rib 5) provide support for the gear aft attachment.

Titanium fittings mounted on the forward face of the front spar and on the skin panel below the front spar provide the pylon forward attachment. Titanium fittings mounted on an inter-rib diaphragm between STA482(Rib 8) and STA513(Rib 9) provide the pylon aft attachment.
(Ref. Fig. 002)

A. Wing Spars

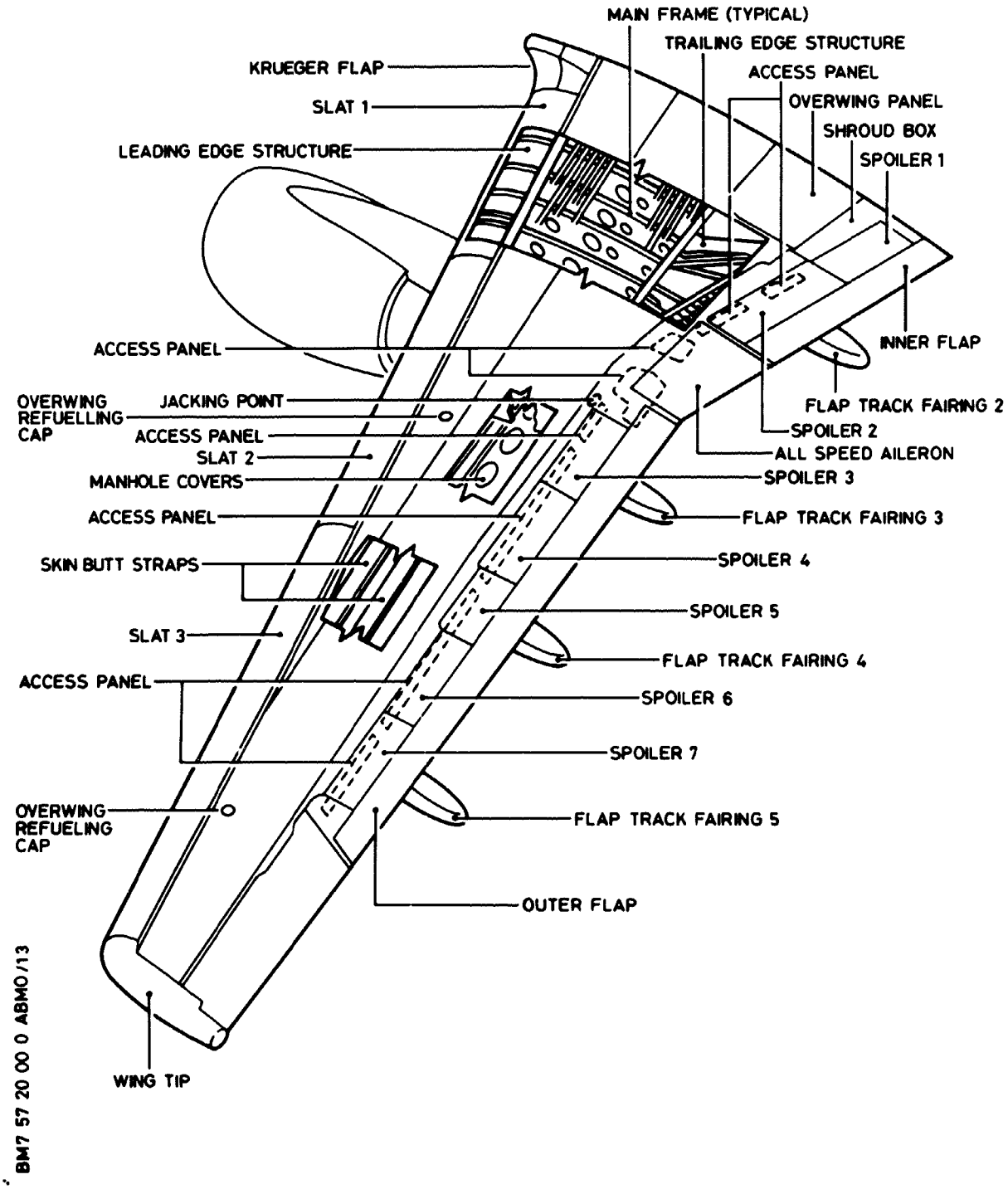
The inner sections of both front and rear spars are integrally machined from forged stretched plate and the outer sections from forged or rolled stretched plate. A build door is provided in the front spar between the wing root and STA67(Rib 2) for use during assembly of the wing to the center box. The inner and outer sections of the spars are joined at STA590(Rib 10) and the spar web joint fitting behind the rear spar also supports the main wing jacking point.

Front and rear spar inner sections have titanium crack retarders fitted in addition to machined integral crack retarders. Holes in the spars through which the slat-tracks, screwjacks and spoiler actuators pass have integral reinforcing and titanium reinforcing plates.

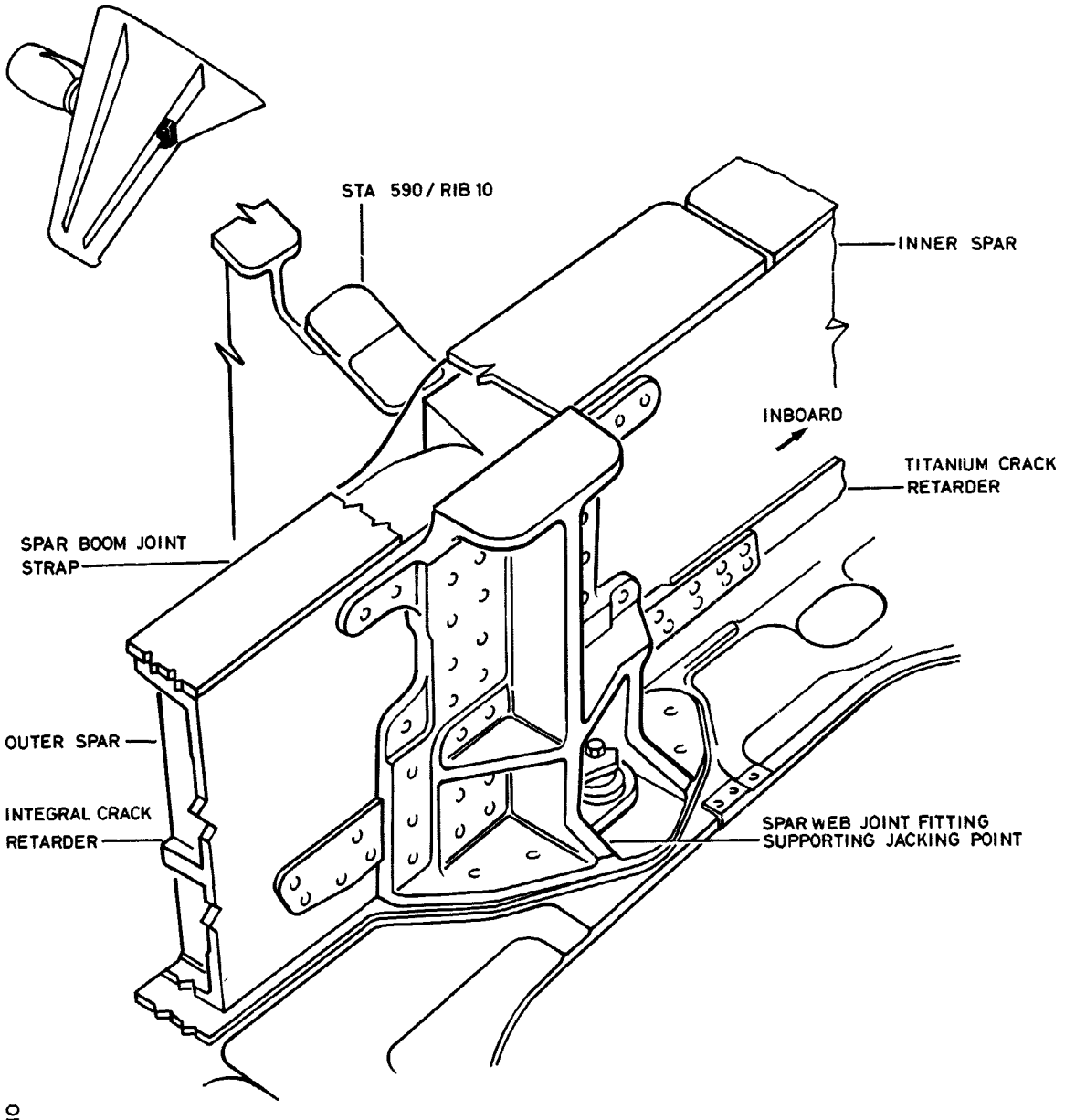
B. Ribs

(Ref. Fig. 003)

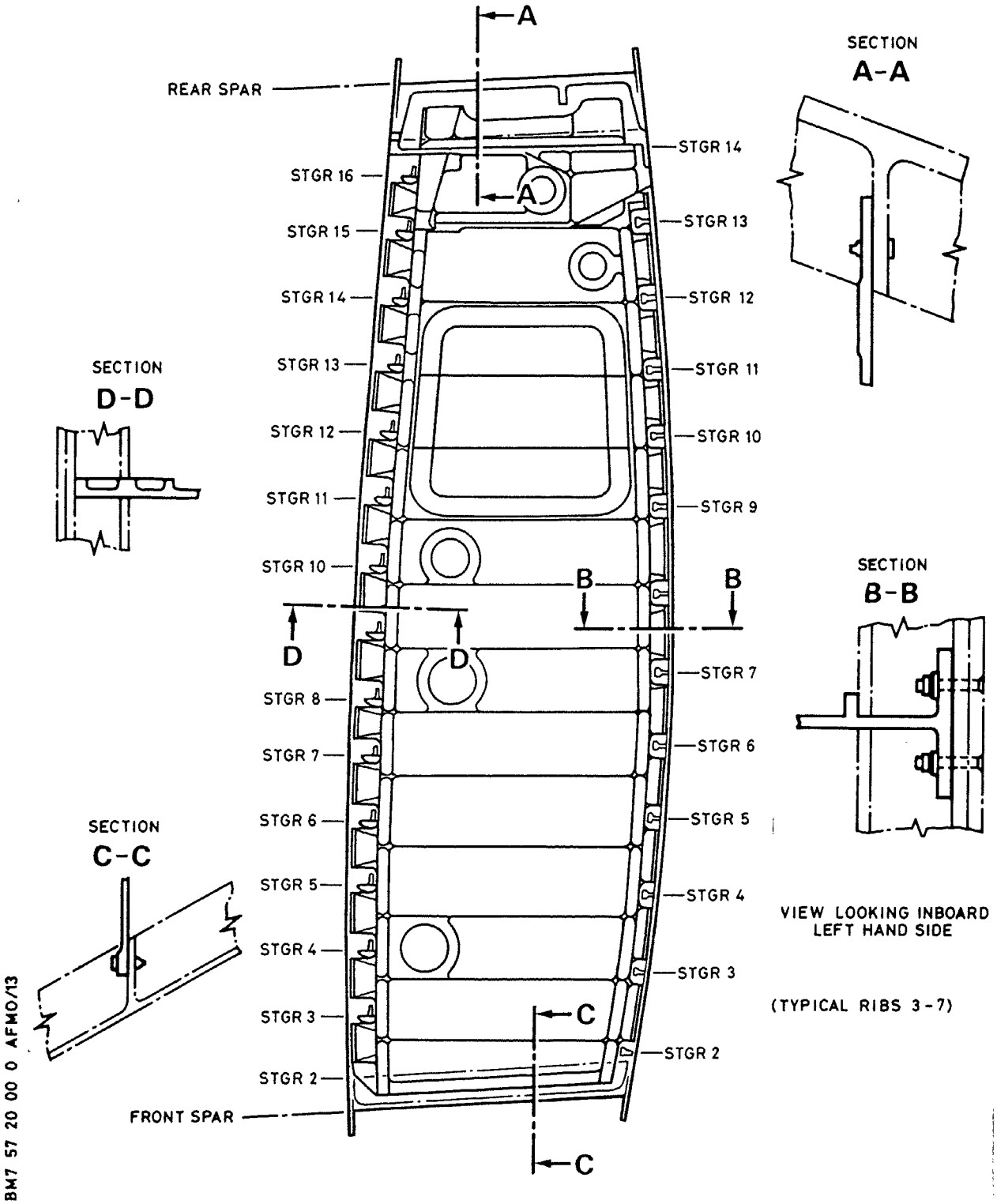
Ribs at STA207(Rib 4), STA270(Rib 5), STA482(Rib 8) and STA513(Rib 9) are integrally machined from forged or rolled stretched plate, the



Outer Wing - General
Figure 001



Rear Spar Joint
Figure 002



Typical Rib
Figure 003

remainder from rolled stretched plate. Ribs at STA67(Rib 2) thru STA 590(Rib 10) have double flanges for skin attachments, the remainder have a single flange. Top skin stringers are cleated to the ribs, bottom stringers are not.

Access for build is provided through holes in ribs at STA270(Rib 5), STA482(Rib 8), STA513(Rib 9) and STA590(Rib 10) which are covered with load-carrying panels. In-service access is provided through ribs at STA67(Rib 2), STA139(Rib 3), STA207(Rib 4), STA339(Rib 6) and STA409 (Rib 7).

C. Main Box Skins
(Ref. Fig. 004)

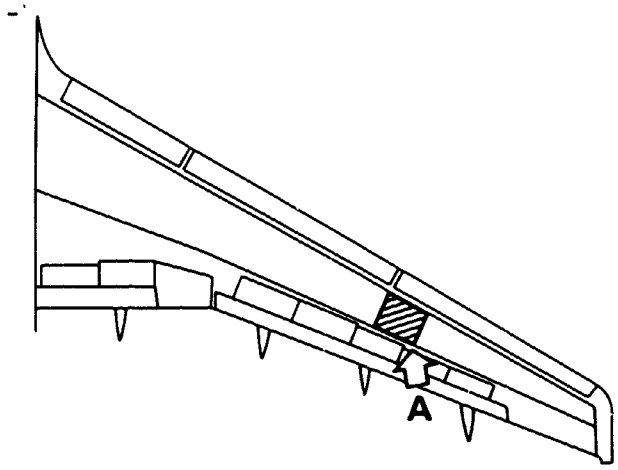
The skin panels and stringers are machined from rolled stretched plate and stretched extrusions respectively. The skin panels are taper machined, and, where possible, pocketed to save weight. They extend from the wing root, one to STA1246(Rib 20) and the other to STA1713(Rib 28) and are butt-jointed together along stringer 9 on the top surface and stringer 8 on the bottom surface. The bottom skin panels inboard of STA813(Rib 13) have a double curvature to provide the required aerodynamic profile of the wing. The stringers are taper and step machined.
A drip fence on the outer bottom skin panel extends from the front spar datum across STA1713 (Rib 28) to stringer 12A.

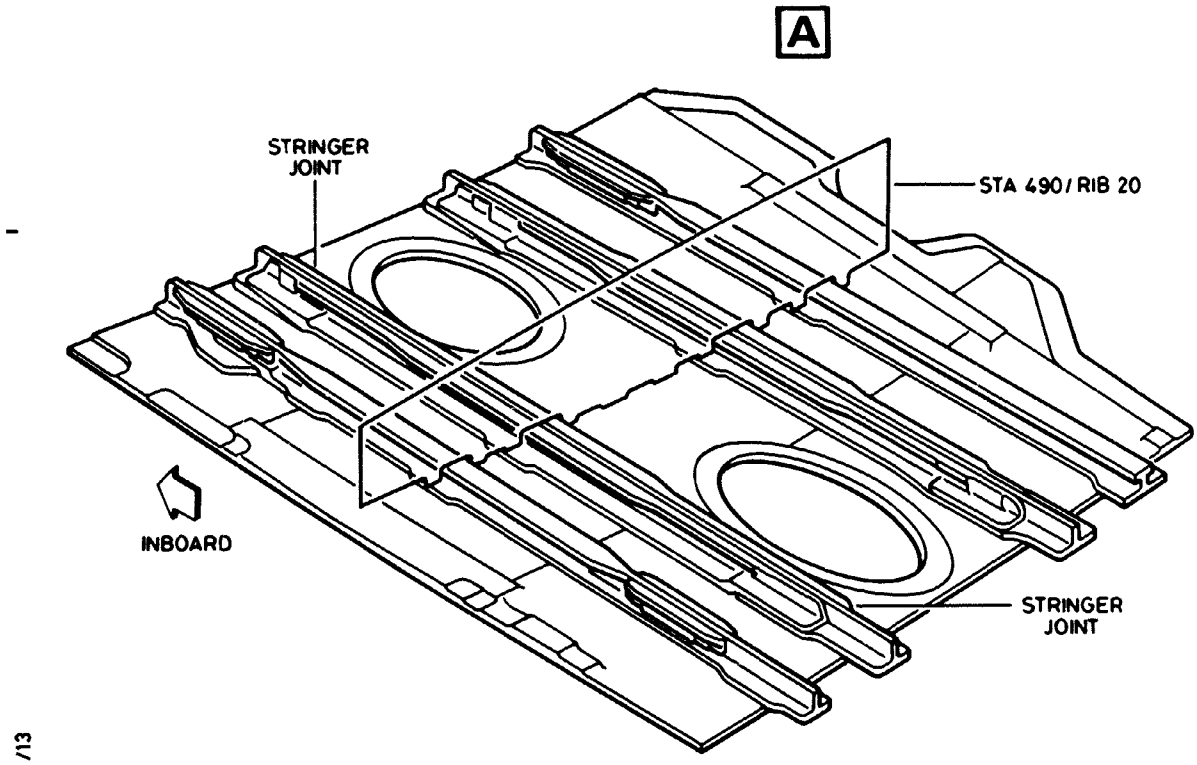
Top and bottom skin panels extend a short distance beyond the front spar to provide attachment for the fixed leading-edge structure. The skin panels also extend aft over the main landing gear pick-up support rib forming the top and bottom skins of a box structure. Outboard of the main landing gear the skin panels extend behind the rear spar to provide attachment for the fixed trailing-edge structure.

Integrally reinforced manhole and fuel pump aperture surrounds are located in the aft bottom inner and the bottom outer skin panels; the latter also contains the apertures for the surge tank NACA intake.

Manhole doors are non load-carrying (i.e. clamped) in the bottom inner skin panel and are bolted load-carrying doors in the bottom outer skin panel. Apertures in the top skin panels are closed by access doors and two overwing refueling caps. Machined plates attached to the top and bottom skin panels provide reinforcing at the pylon attachment fittings. The bottom plate is external and at the top there is an internal plate together with two external straps over the ribs at STA482(Rib 8) and STA513(Rib 9). At the main landing gear attachments a wide spreader plate extends from just aft of the skin spanwise butt joint to the main gear aft pick-up.

Fuel and water drainage to low points in the wing is achieved by drain holes in ribs and sealant-free gaps between ribs and lower skin panels or stringers. Fore and aft drainage is provided for by holes thru STGRS 6,7, 9,12 and 13, outboard of STA 935 (Rib 15).





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Main Box Skins
Figure 004

2. Attach Fittings

A. Main Landing Gear
(Ref. Fig. 005)

The main landing gear forward attachment is mounted on the aft face of the rear spar at STA207(Rib1). Extensions of the top and bottom skin panels and a support rib aft of STA207(Rib5) provide support for the gear aft attachment.

B. Flap Track Beams, 2 thru 5.

Titanium machined brackets mounted on the lower surface of the wing box at STA813(Rib 13), STA1119(Rib 18) and STA1434(Rib 23) and at the rear spar provide support for the flap track beams 3, 4 and 5. Flap track 2 is supported at the rear spar and the rear false spar. The attachments of track beams 2 thru 5 are designed to permit a slight movement between the beams and wing brackets in order to prevent wing structure flexure pre-loading the flap beams.

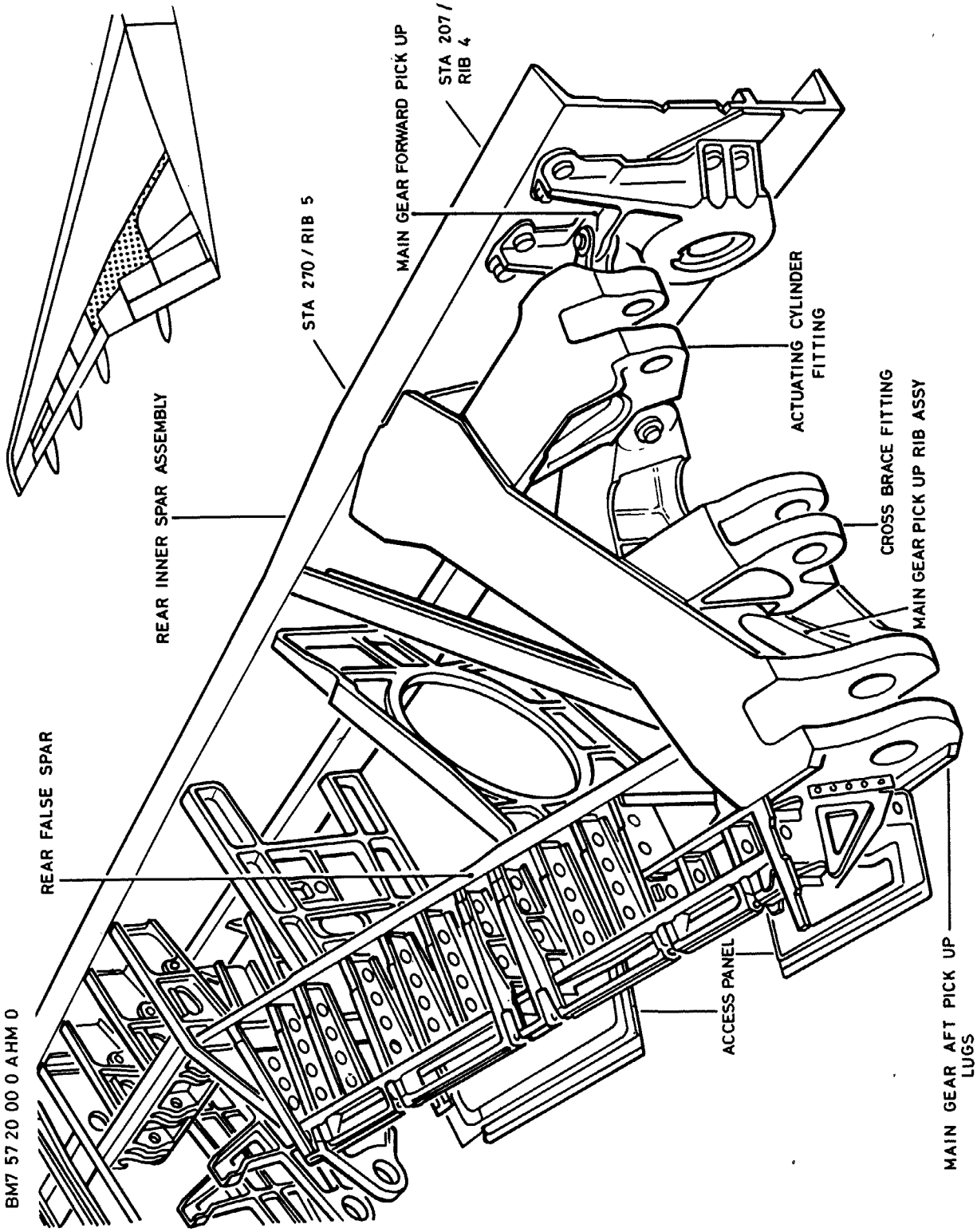
C. Flap Track Fairings
Small machined aluminum alloy brackets are mounted on the lower surface of the wing to provide support for the fixed flap track fairings.

D. Engine Pylon
(Ref. Fig. 006)
The pylon forward vertical attachment is provided by two pairs of titanium fittings mounted on the forward face of the front spar. Vertical loads are transferred from the pylon to these fittings through dual load path links. Thrust and side loads are reacted at a titanium spigot fitting mounted on the bottom skin panel below the front spar. The aft pylon support is provided by dual load path titanium fittings which are attached to an aluminum alloy diaphragm located between ribs at STA482(Rib 8) and STA513(Rib 9) approximately mid-way between front and rear spars. Vertical and side loads are transmitted from the pylon aft attachment fitting through dual load path links. Small machined aluminum alloy brackets are mounted on the lower surface of the wing to provide support for the pylon fairing.

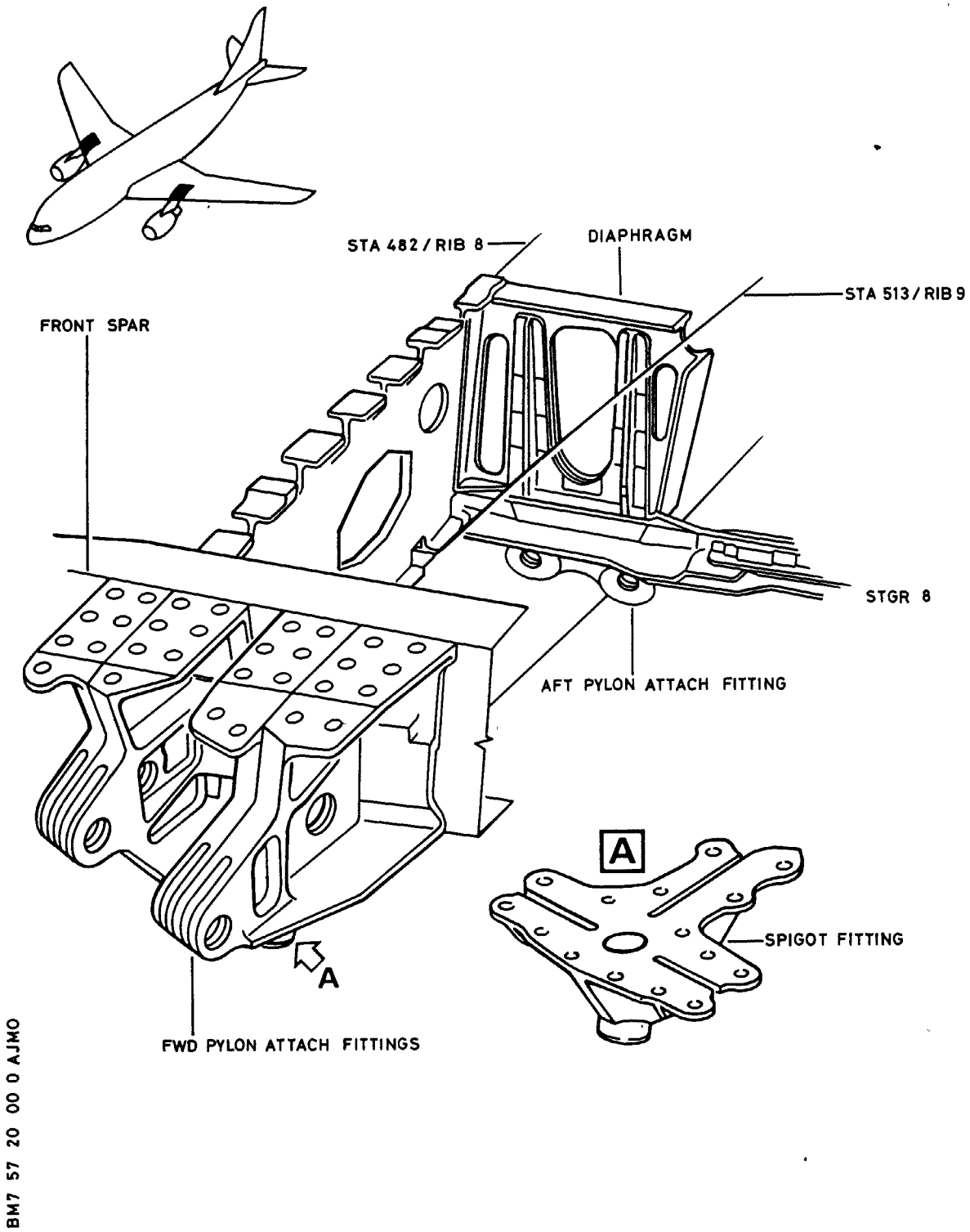
E. Escape Rope Attachment
An escape rope attachment bracket is located approximately mid-way between front and rear spars outboard of STA513 (Rib 9).

3. Root Joints
(Ref. Fig. 007)

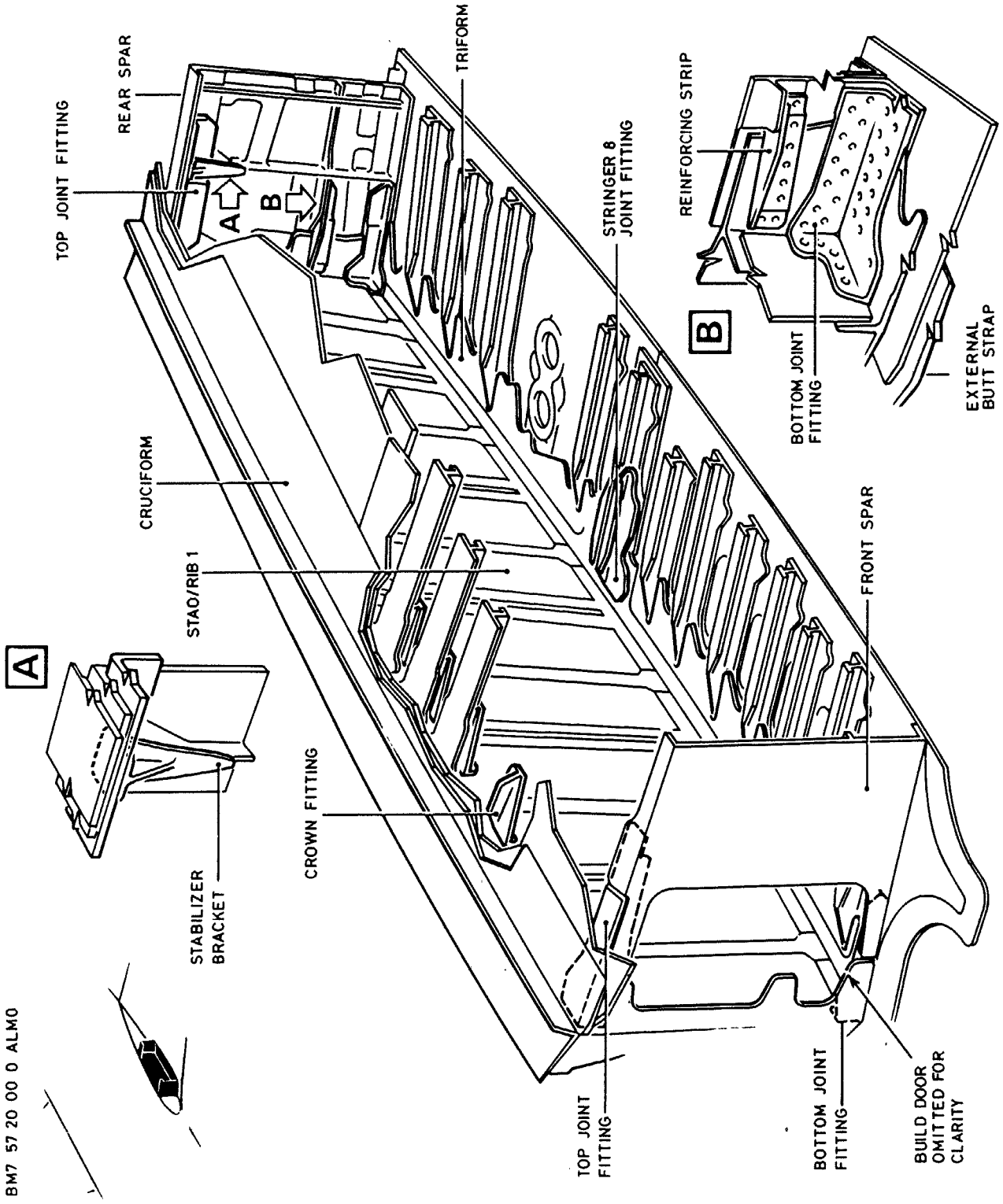
Loads from wing to center wing box stringers are carried by a cruciform member and crown fittings which are bolted to each other and to Rib 1. Bottom skin continuity is provided through a triform member at STA0(Rib 1) which also forms the bottom boom of rib 1, plus an external tapered butt strap. Loads from wing to center wing box stringers are carried by the


STA 207 / RIB 4
MAIN GEAR FORWARD PICK UP
STA 270 / RIB 5
ACTUATING CYLINDER FITTING
REAR INNER SPAR ASSEMBLY
CROSS BRACE FITTING
MAIN GEAR PICK UP RIB ASSY
REAR FALSE SPAR
ACCESS PANEL
MAIN GEAR AFT PICK UP LUGS
BM7 57 20 00 0 AHM 0

Main landing Gear Attachment
Figure 005



Pylon Attachment to Wing
Figure 006



Wing Root
Figure 007

triform member. Joint members at the front and rear spars provide web and boom connections to the center wing box.

4. Fasteners - bolts
Interference-fit fasteners are used to attach the skin panels to the spars and ribs. Radius lead-in titanium bolts are the standard fastener. The stringers are fastened to the inner skin panels with drivmatic aluminum alloy slug rivets and radius lead-in titanium interference-fit bolts, except for the bottom aft panel stringers, where only bolts are used. The stringers are fastened to the outer skin panels using pre-formed head aluminum alloy rivets set on a drivmatic machine.

SKINS AND PLATING - INSPECTION/CHECK

1. Reason for the Job

A. Inspection/Check of Manhole Cover Types 4, 6, 6A, 7, 11 thru 23 and Booster Pump surrounds.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 2 to 6 m (6 to 20 ft)
B.	Inspection Lamp
Referenced Procedures	
- 28-11-22, P. Block 401	Manhole Covers Type 4, 6, 6A, 7
- 28-11-24, P. Block 401	Manhole Covers - Booster Pumps
51-23-20, P. Block 1	Special Coatings
- 51-75-10, P. Block 1	Paint Coatings
- 57-20-12, P. Block 801	Skins and Plating

3. Procedure

A. Job Set-up
(1)Position access platforms.
(2)Remove manhole covers (Ref. 28-11-22, 28-11-24, P Block 401.

B. Inspection

CAUTION : ANY DAMAGED PAINT FINISH ON COMPOSITE MATERIAL STRUCTURES, MUST BE RESTORED TO PREVENT FURTHER DETERIORATION (REF. 51-23-20, P. BLOCK 1 OR 51-75-10, P. BLOCK 801).

(1)Using inspection lamp, inspect vertical face and corners (edges) of wing skin manhole surrounds for signs of damage (scores, indentations, corrosion pitting etc).
(2)Check visually, all composite structure adjacent to booster pumps for damage, evidence of cracks and paint condition.
(3)If damage is found, refer to 57-20-12, P. Block 801).

C. Close-up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install manhole covers (Ref. 28-11-22, 28-11-24, P. Block 401).
(3)Remove access platforms.

R **WARNING** : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND CHOCKS ARE IN
R POSITION.

R FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE
R IN POSITION.

R FLIGHT CONTROLS - MAKE SURE THAT THE TRAVEL RANGES OF THE CONTROL
R SURFACES ARE CLEAR.

1. Reason for the Job

A. Application of Abrasion Resistant Coating if renewal is necessary for any reason in the following areas:-
- Wing/Flap track fairing intersection at track No.2, 3, 4 and 5.
- Wing/Pylon fairings intersection.
- Wing/Jacking fitting and fairing.

2. Equipment and Materials

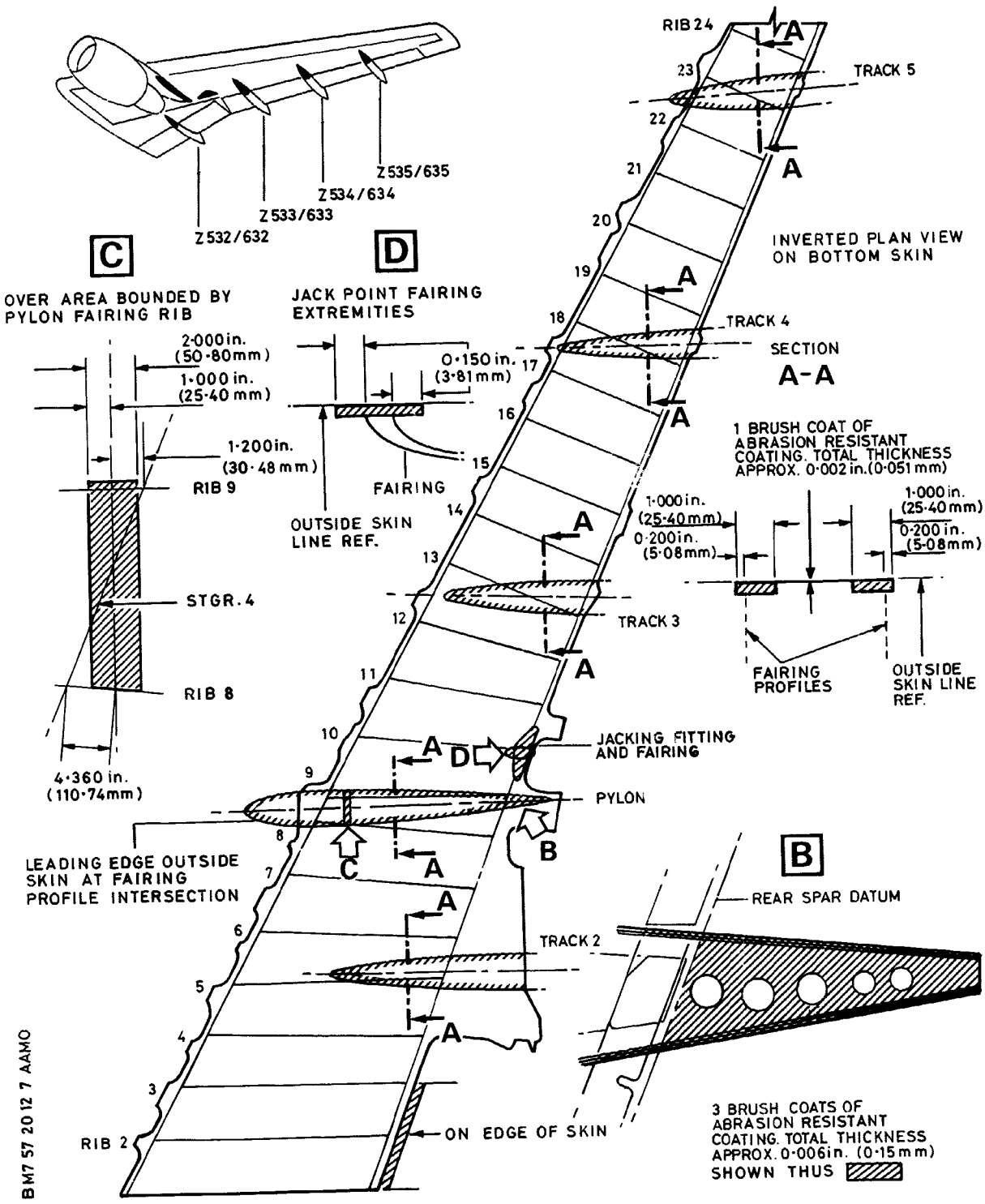
ITEM	DESIGNATION
A.	Access Platform 3.1 to 4.2 m (10 to 14 ft)
B.	Protective Gloves
C.	Lint-Free Cleaning Cloths
D.	Brush, Cleaning/Washing
E.	Brush, Painting
F.	Masking Tape
G.	Waterproof Silicone Carbide Paper, Grade 320
H.	Protective Goggles
R J. Material No. 07-003	Lacquer (Ref. 20-31-00)
R K. Material No. 11-026	Cleaning Agents (Ref. 20-31-00)
Referenced Procedures	
- 06-41-54, P. Block 1	Nacelles And Pylons
- 51-23-20, P. Block 1	Abrasion Resistance Coating
- 51-75-10, P. Block 801	Repair Of Paint Coatings
- 57-20-35, P. Block 401	Flap Track Fairings

3. Procedure
(Ref. Fig. 701)

A. General

R **WARNING** : DO NOT INGEST LIQUIDS. DO NOT INHALE FUMES. DO NOT LET THE
R MATERIALS CONTACT YOUR SKIN OR SPLASH INTO YOUR EYES. OBEY THE
R RELEVANT SAFETY PRECAUTIONS.

(1)When applying materials associated with cleaning/painting operations, strictly observe the manufacturer's instructions for each material. Observe also the following general safety precautions.



Abrasion Resistant Coating
Figure 701

(2)Apply the materials in well ventilated areas. Comply also with any relevant regulations.
(3)Wear an apron and protective gloves, and goggles or a face mask, particularly when working over your head.

If excessive fume inhalation - move to fresh air and obtain medical aid. Do not walk patient about.
If skin contaminated - wash off with water.
If eyes contaminated - irrigate eyes with water and obtain medical aid.

B. Job Set-Up
(1)As applicable, effect the appropriate operation(s):-
- Remove the fixed flap track fairing from the relevant track(s) (Ref. 57-20-35, P. Block 401).
- Remove the pylon fairings (access doors on the LH nacelle or on the RH nacelle) (Ref. 06-41-54, P. Block 1).
- Remove the jacking fitting fairing 575(675)EB.

(2)Position the access platform.

C. Cleaning

R WARNING : OBEY THE RELEVANT SAFETY PRECAUTIONS.

R (1)Use clean lint-free cloths moistened with cleaning agent (Material
R No. 11-026) to clean/degrease the wing interface.
- Apply cleaning fluid to cloth and not cloth to fluid, to prevent transfer contamination.
R - Progressively clean the surface by carefully swabbing a small area at
R a time, then wipe clean before the cleaning fluid dries. Change cloths
R frequently to make sure that dirt is not re-deposited on the surface.
- Avoid excessive swabbing to prevent removal of any paint. If necessary use a washing brush to clean depressions and edges.

(2)In the event of extensive contamination, repeat cleaning operation.
(3)Immediately subsequent to completion of satisfactory cleaning operations rinse the surface with clean water.
(4)Carefully dry the affected area(s) with clean, dry, lint-free cloths.

D. Treatment Before Coating

R WARNING : OBEY THE RELEVANT SAFETY PRECAUTIONS.

(1)If necessary, smooth down the surface to be coated using waterproof silicone carbide paper.

NOTE: If the finish coat or primer coat is damaged, repair in accordance with 51-75-10, P. Block 801.

R (2)Use a clean lint-free cloth moistened with cleaning agent (Material
R No. 11-026) to remove abrasive grit and clean the surface. Wipe the
R surface clean before the cleaning agent dries. Do not touch the surface

R by hand.

R NOTE : Lacquer (Material No. 07-003) is to be applied immediately
R subsequent to satisfactory cleaning/preparatory operations.

E. Application

R WARNING : OBEY THE RELEVANT SAFETY PRECAUTIONS.

R (1)Apply lacquer (Material No. 07-003) by brush (Ref. 51-23-20, P. Block 1)
R and reinstate the coating to the approximate thickness of the original
R application.

R NOTE : The original coating dimensions are specified on the figure.

F. Close-Up
(1)Install flap track fairing(s) (Ref. 57-20-35, P. Block 401) and/or pylon fairings (access doors) (Ref. 06-41-54, P. Block 1) and/or jacking fitting fairing 575(675)EB.
R (2)Make sure that the work area is clean and clear of tools and all other
R items of equipment.
R (3)Remove the access platform.

1. Reason for the Job

A. Repair to Manhole Cover Surrounds Type 4, 6, 6A, 7, 11 thru 23 and Booster Pump surrounds.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Waterproof Silicon Carbide Paper (320 Grade)
B.	Woven Nylon Scouring Pad
C.	Access Platform 2 to 6 m (6 to 20 ft)
D. Material No. 13-002	Pre-treatment for Painting (Ref. 20-31-00)
E. Material No. 16-006	Structure Paints (Ref. 20-31-00)
Referenced Procedures	
- 28-11-22, P. Block 401	Manhole Covers,
- 28-11-24, P. Block 401	Manhole Covers, Booster Pumps

3. Procedure

A. Job Set-up
(1)Position the access platform.
(2)Remove the manhole cover (Ref. 28-11-22, 28-11-24, P. Block 401).

B. Repair

R CAUTION: PERCENTAGE (%) OF ALLOWABLE DAMAGE IS ALWAYS RELATED TO THE
R NOMINAL MATERIAL THICKNESS AS SPECIFIED IN SRM (STUCTURAL
R REPAIR MANUAL).

(1)Blend out damaged area to a smooth polished surface using silicon carbide paper and nylon scouring pad.
(2)Assess depth of completed repair. If greater than 0.010 in (0.25 mm), refer to the Structural Repair Manual.
(3)Restore surface finish using solution (Material No. 13-002) and primer (Material No. 16-006).

C. Close-up
(1)Install the manhole cover (Ref. 28-11-22, 28-11-24, P. Block 401).
(2)Remove the access platform.

WARNING : CHECK THAT THE LANDING GEAR GROUND SAFETIES INCLUDING WHEEL CHOCKS ARE IN POSITION.

WARNING : BEFORE APPLYING OR RELIEVING HYDRAULIC SYSTEM PRESSURE, MAKE SURE THAT THE TRAVEL RANGES OF THE SURFACES ARE CLEAR.

WARNING : BEFORE PRESSURIZING HYDRAULIC SYSTEMS, CHECK THAT ALL CONTROLS ARE SET TO CORRESPOND WITH THE ACTUAL POSITION OF THE SERVICES THEY OPERATE.

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

WARNING : CLEANING AGENT (MATERIAL NO 11-004) IS TOXIC AND FLAMMABLE. DO NOT BREATHE FUMES. USE IN A WELL VENTILATED AREA, FREE FROM FLAME, SPARKS OR HOT SURFACES. OBSERVE THE RELEVANT SAFETY PRECAUTIONS AND FIRST AID INSTRUCTIONS.

1. Reason for the Job

A. Flap track/beam Nos. 1 to 5 - Removal for Replacement.
B. Flap track/beam Nos. 2 to 5 - Forward Attachment Bearing - Removal for Replacement.

2. Equipment and Materials

	ITEM	DESIGNATION
	A.	Access Platform, 3.1 - 4.3 m (10 - 14 ft.)
	B. 98A27503000000	Guard - Safety, Flap/Slat Ctl Lever
	C. 98A27508003000	Rigging Pin Set - Flap Adjustment
R	D. 98A57208666000	Hoisting Device - Flap Tracks
	E. 98A27508038000	Socket Wrench Set - Flap Track Rear Attachment
	F. 98A27508041000	Holding Tool - Distance Bushes
	G. SL90-349-5000	Tool - Installation, Tab Washers STA-LOK NSA5454
	H. SL90-349-6875	Tool - Installation, Tab Washers STA-LOK NSA5454
	J. SL90-350-5000	Tool - Extraction, Tab Washers STA-LOK NSA5454
	K. SL90-350-6875	Tool - Extraction, Tab Washers STA-LOK NSA5454
	L.	Torque Wrench, 0.2 to 1.0 m.daN (1.5 to 7.4 lbf.ft.)
	M.	Torque Wrench, 2.0 to 13 m.daN (14.8 to 96 lbf.ft.)
	N.	Torque Wrench, 12.0 to 25.0 m.daN (88.5 to 184.0 lbf.ft.)
	P.	Torque Wrench, 20.0 to 75.0 m.daN

ITEM	DESIGNATION
	(148.0 to 553.0 lbf.ft.)
Q.	Feeler Gage
R.	Safety Barriers
S.	Circuit Breaker Safety Clips and Tags
T.	Locking Washers
U.	Tab Washers
V.	Cotter Pins
W. Material No. 05-002	Special Materials (Ref. 20-31-00)
X. Material No. 05-005	Special Materials (Ref. 20-31-00)
Y. Material No. 06-002	Lubricants (Ref. 20-31-00)
Z. Material No. 09-013	Sealants (Ref. 20-31-00)
AA.Material No. 09-018	Sealants (Ref. 20-31-00)
AB.Material No. 11-004	Cleaning Agents (Ref. 20-31-00)
AC.	Lint Free Cloth
AD.	Non-metallic Scraper
AE.	Hook Spanner

Referenced Procedures

- 12-22-27, P. Block 1	Flight Controls Lubrication
- 20-28-11, P. Block 1	Electrical Bonding
- 27-50-00, P. Block 301	Flaps
- 27-50-11, P. Block 401	Inboard Flap
- 27-50-12, P. Block 401	Outboard Flap
- 27-50-21, P. Block 401	Flap Track Fairings
- 27-50-22, P. Block 401	Fairing Operating Rod
- 27-50-23, P. Block 401	Fairing Side Load Stay
- 27-54-00, P. Block 501	Hydraulic Actuation and Power Transmission (Flaps)
- 27-54-25, P. Block 401	Carriage 1
- 27-54-26, P. Block 401	Carriage 2
- 27-54-27, P. Block 401	Carriage 3
- 27-54-28, P. Block 401	Carriage 4
- 27-54-29, P. Block 401	Carriage 5
- 51-72-20, P. Block 201	SRM - Replacement of Bushes in Situ
- 57-20-35, P. Block 401	Fillets and Fairings

2. Procedure

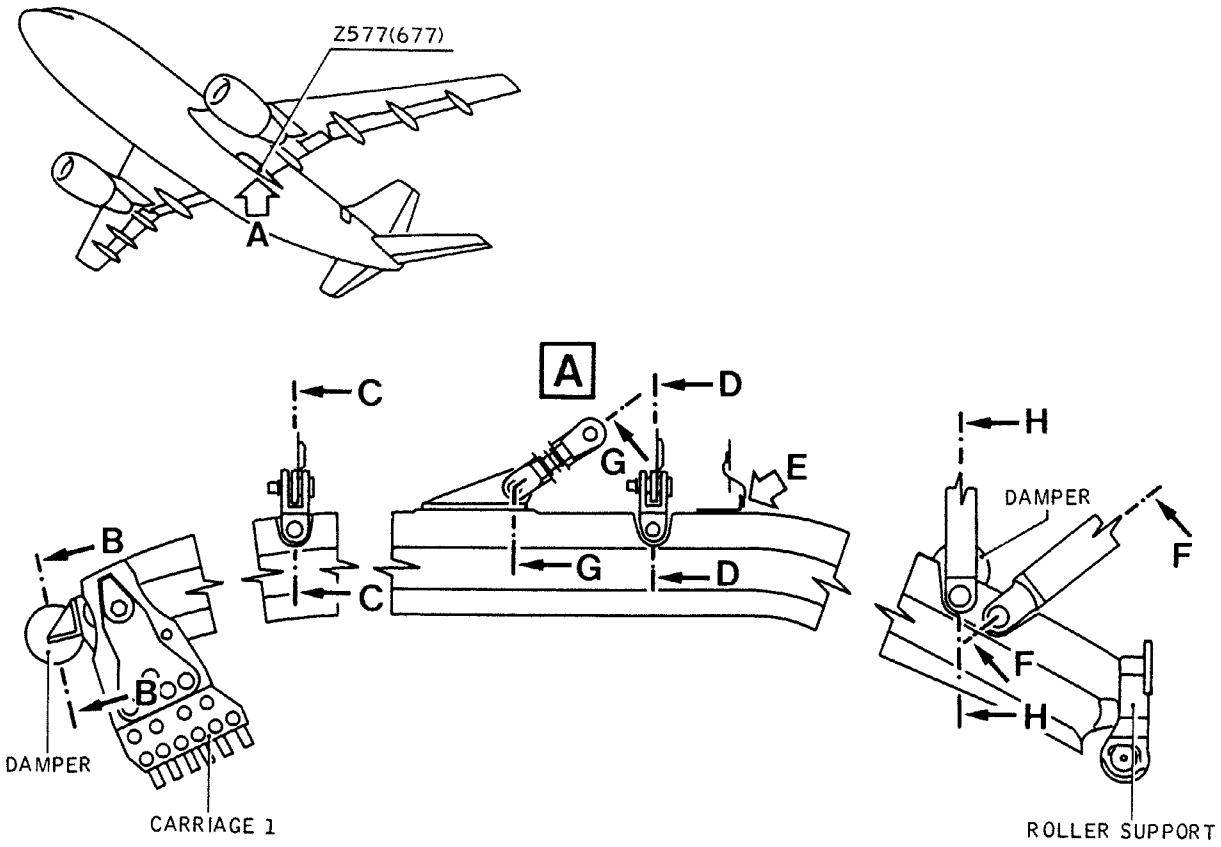
A. Job Set-Up
(1)Position safety barriers.
(2)Extend flaps to 40° position (Ref. 27-50-00, P. Block 301).
(3)Install safety guard PN 98A27503003000 on flap/slat control lever quadrant.
(4)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 2	6CV	331/V61
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 1	5CV	332/U61

PANEL	SERVICE	IDENT.	LOCATION
133VU	FLT CTL/SFCC/LAND RECOVERY/SUPPLY/ FLAPS/SYS 1	10CV	335/R67

(5)Position access platform.
(6)Flap track/beam 1
(a)Remove access panel 572AB (672AB).
(b)Support inboard end of flap from suitable crane or gantry using inboard flap lifting attachment point.
(c)Remove carriage 1 (Ref. 27-54-25, P. Block 401).
(7)Flap tracks 2 thru 5
(a)Remove flap track moveable fairing (Ref. 27-50-21, P. Block 401).
(b)Remove flap track fixed fairing (Ref. 57-20-35, P. Block 401).
(c)Remove fairing operating rod (Ref. 27-50-22, P. Block 401).
(d)Remove fairing side load stay (Ref. 27-50-23, P. Block 401).
(8)Flap track/beam 2
(a)Remove inboard flap (Ref. 27-50-11, P. Block 401).
(9)Flap track/beams 3 thru 5
(a)Remove outboard flap (Ref. 27-50-12, P. Block 401).
NOTE : Removal of outboard flap is not necessary if only one track is to be removed.

B. Removal
(1)Flap track/beam 1
(Ref. Fig. 401) (Sheet 1/2)
(Ref. Fig. 401) (Sheet 2/2)
WARNING : FLAP TRACK/BEAM WEIGHS APPROXIMATELY 19 KG (42 LBS.).
(a)Remove nut (32), washer (31), bolt (29) and washer (30). Disconnect bonding strap from flap track/beam (Ref. 20-28-11, P. Block 1).
(b)Release tab washer (7); remove screw (6), remove and discard tab washer (7).
(c)Remove bolt (8).
(d)Release tab washer (24); remove screw (23), remove and discard tab washer (24).
(e)Remove bolt (25).
(f)Remove and discard cotter pin (4); remove castle nut (5), washer (3), bolt (1) and bush (2). Disconnect damper assembly from flap track/beam.
(g)Release tab washer (27); remove screw (26), remove and discard tab washer (27).
(h)Remove bolt (28).
(i)Support flap track/beam and release tab washer (19), remove bolt (20), remove and discard tab washer (19).
(j)Remove bolt (21) and tooth plate (22).
WARNING : BEFORE REMOVAL OF FLAP TRACK/BEAM (A MINIMUM OF) TWO OPERATIVES MUST BE SUITABLY POSITIONED TO SUPPORT THE FLAP TRACK/BEAM.
(k)Remove and discard cotter pin (16); remove castle nut (17), washer (15), bolt (13) and bush (14).



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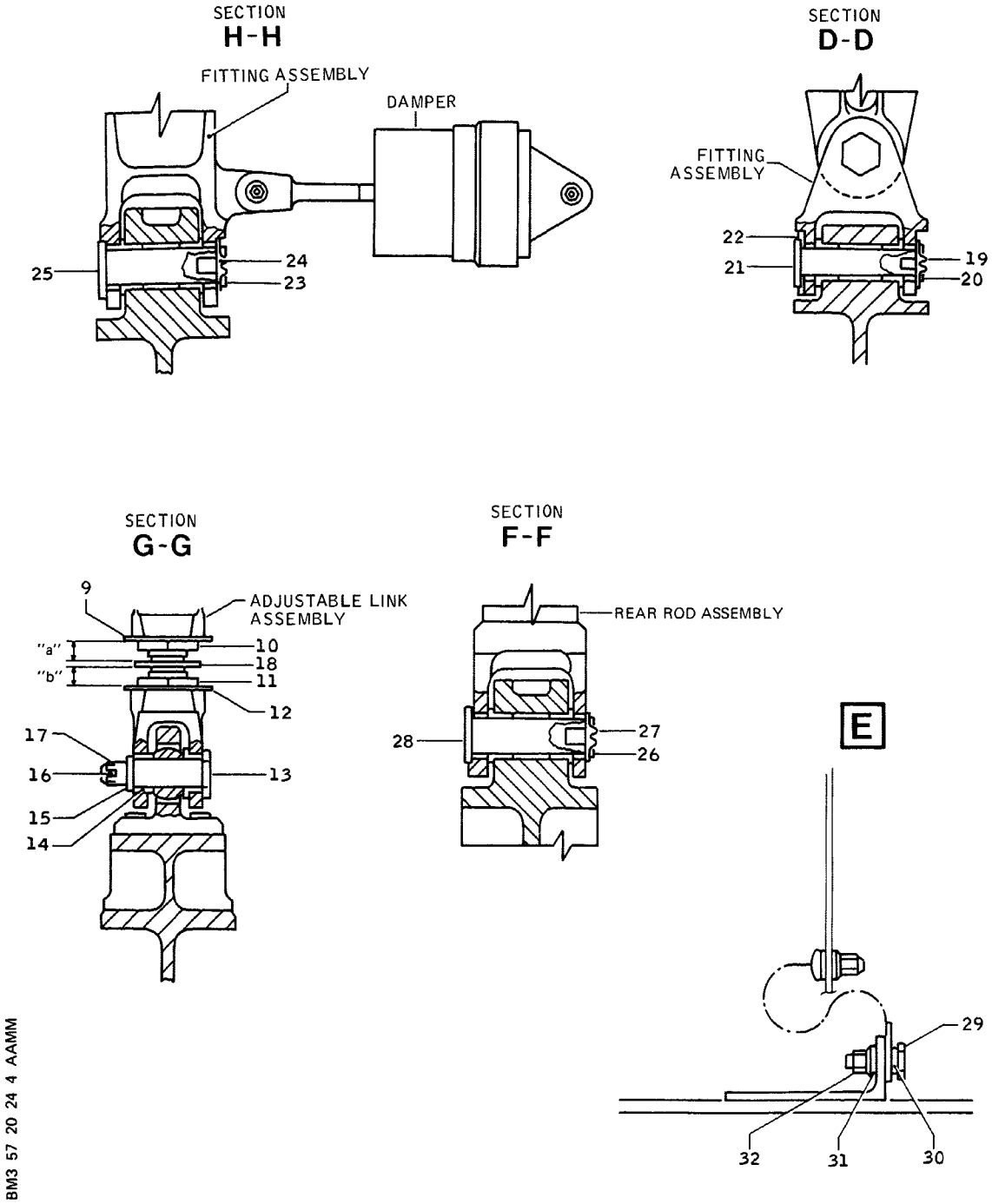
Flap Track/Beam 1
(Sheet 1/2)
Figure 401



Flap Track/Beam 1
(Sheet 2/2)
Figure 401

(l)Remove flap track/beam (weight 19 Kg) (42 lbs.).

(2)Flap track/beam 2
(Ref. Fig. 402) (Sheet 1/2)
(Ref. Fig. 402) (Sheet 2/2)
(Ref. Fig. 403)

WARNING : THE APPROXIMATE WEIGHT OF FLAP TRACK 2 IS 156 KG (344 LBS.).
THE APPROXIMATE WEIGHT OF CARRIAGE 2 IS 86 KG (190 LBS.).

R (a)Prepare flap track hoisting device PN 98A57208666000 for removal of flap track 2 complete with carriage 2 (Ref. Fig. 403).

NOTE : Ensure that carriage 2 is secured to track 2 in zero position with rigging pin PN 98A27508003000.

(b)Using a crane carefully position hoisting device under the flap track. Take care not to damage wing structure.
(c)Attach hoisting device to flap track.
(d)Remove nuts (48), washers (49),(50), screws (47) and disconnect bonding straps.
(e)Remove cotter pin (35), castle nut (36) and washer (37) from forward mounting.
(f)Remove cotter pin (41), castle nut (42), washer (43), bolt (46) and bushes (44),(45) from forward mounting.

NOTE : Do not remove bolt (40) at this stage.

(g)Using STA-LOK extraction tool PN SL90-350-6875 remove tab washer (55).
(h)Make sure that track load is supported by crane. Carefully remove nuts (52) using socket wrench PN 98A27508038000.
(j)Remove bushes (53),(54) and special washers (55). Remove bolt (40) from forward mounting.

NOTE : Record positions of special washers (55).

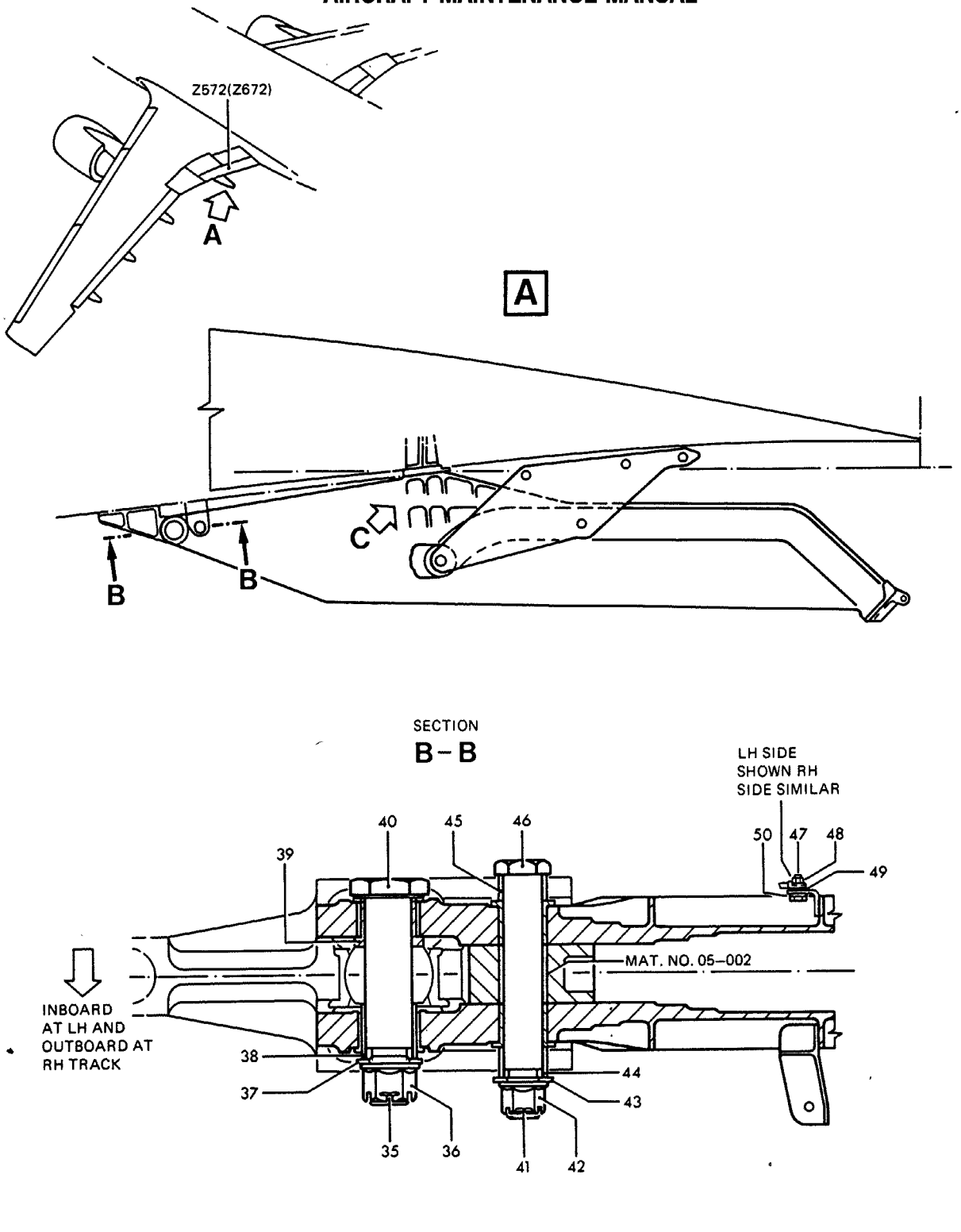
(k)Lower flap track and manoeuver it clear of wing.
(l)Remove bushes (38) and (39).

NOTE : Record position of bushes for replacement.

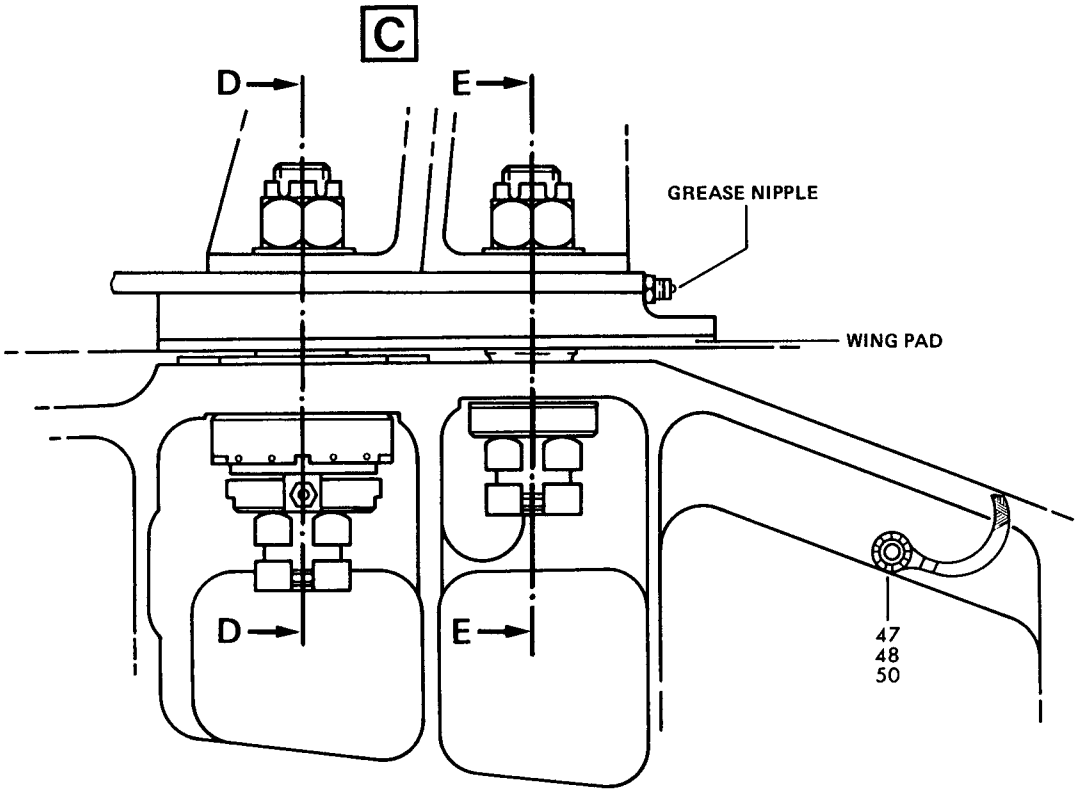
(m)Remove flap track complete with carriage from hoisting device.
(n)Remove carriage 2 (Ref. 27-54-26, P. Block 401).

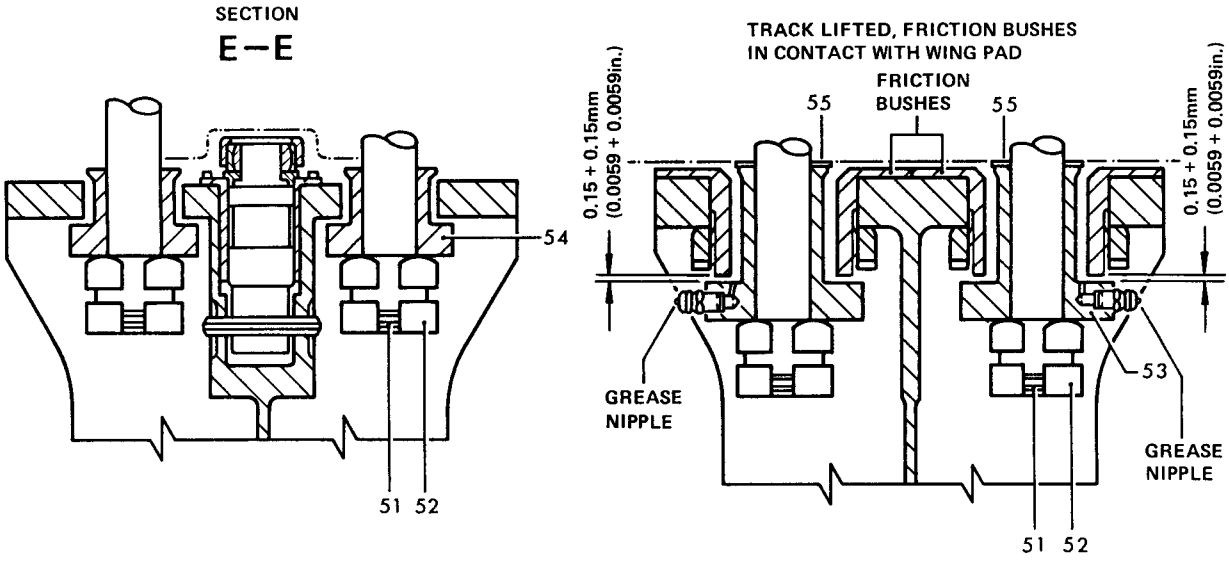
NOTE : Removal of carriage is only necessary if a new flap track is to be installed.

(3)Flap track/beams 3 thru 5
(Ref. Fig. 404) (Sheet 1/3)
(Ref. Fig. 404) (Sheet 2/3)
(Ref. Fig. 404) (Sheet 3/3)



Flap Track/Beam 2
(Sheet 1/2)
Figure 402





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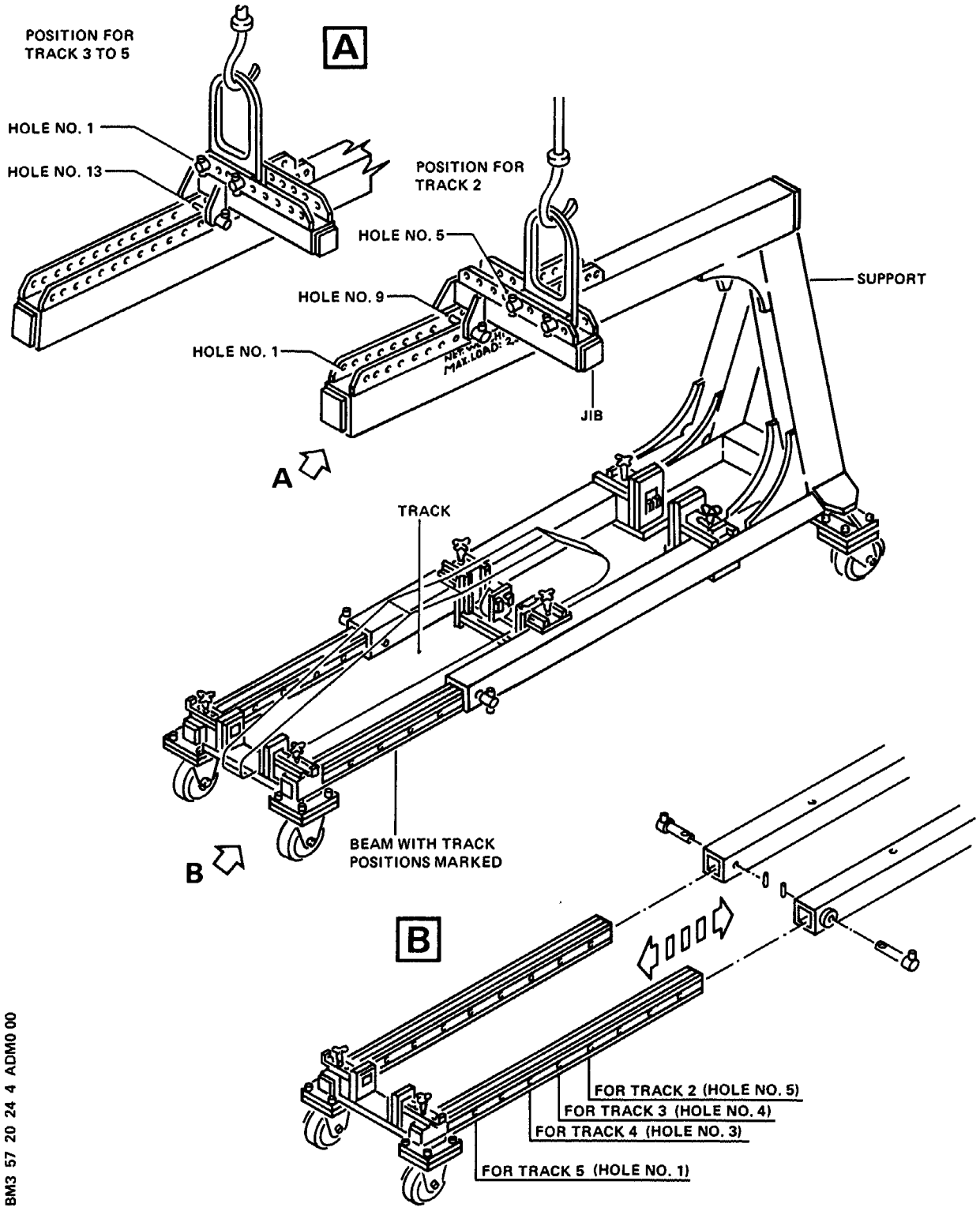
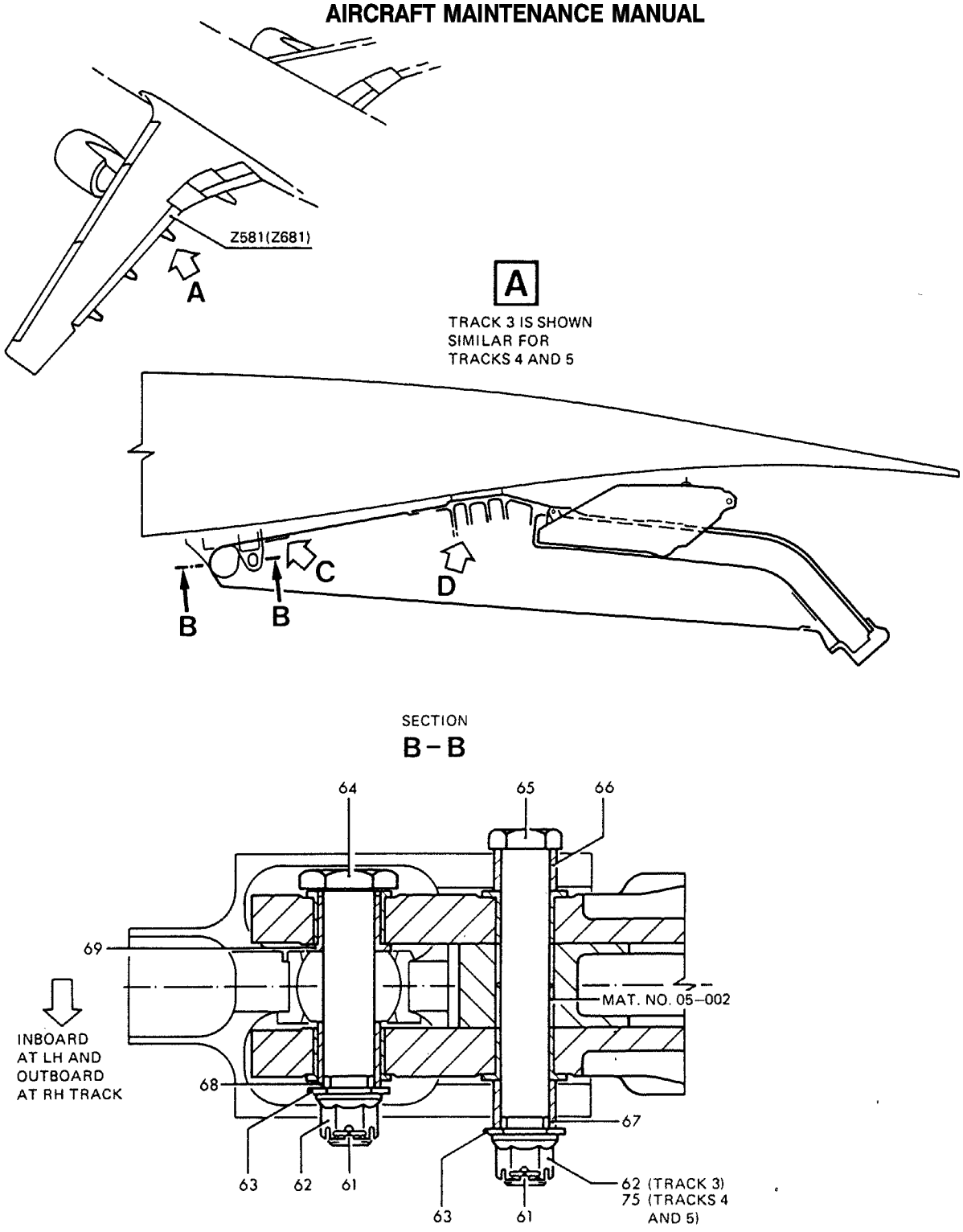
Flap Track/Beam 2
(Sheet 2/2)
Figure 402



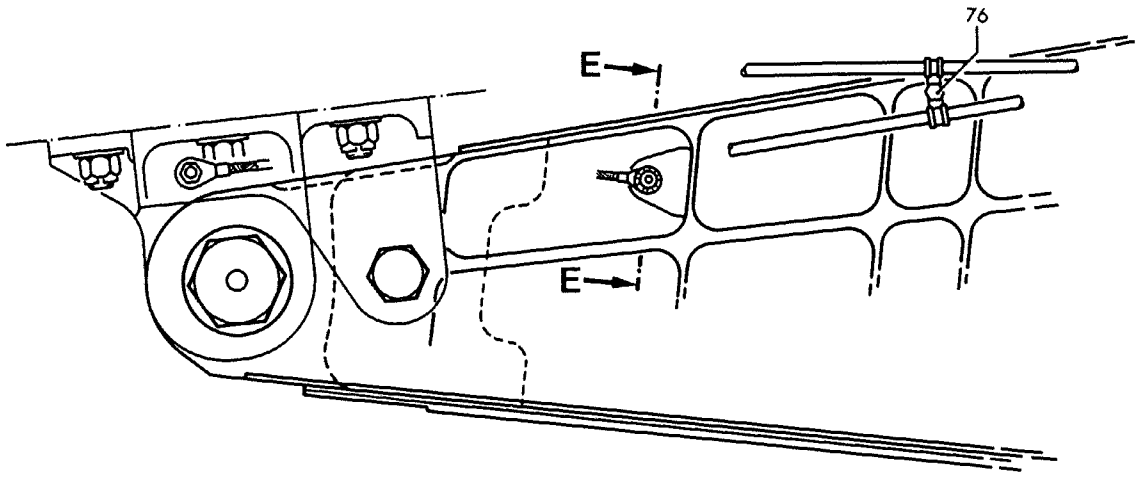
Hoisting Device For Flap Tracks
Figure 403



Flap Track/Beams 3 thru 5
(Sheet 1/3)
Figure 404

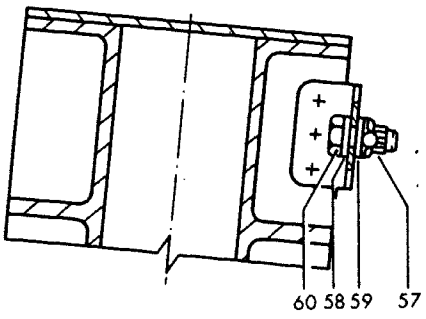
C

TRACK 5
ONLY



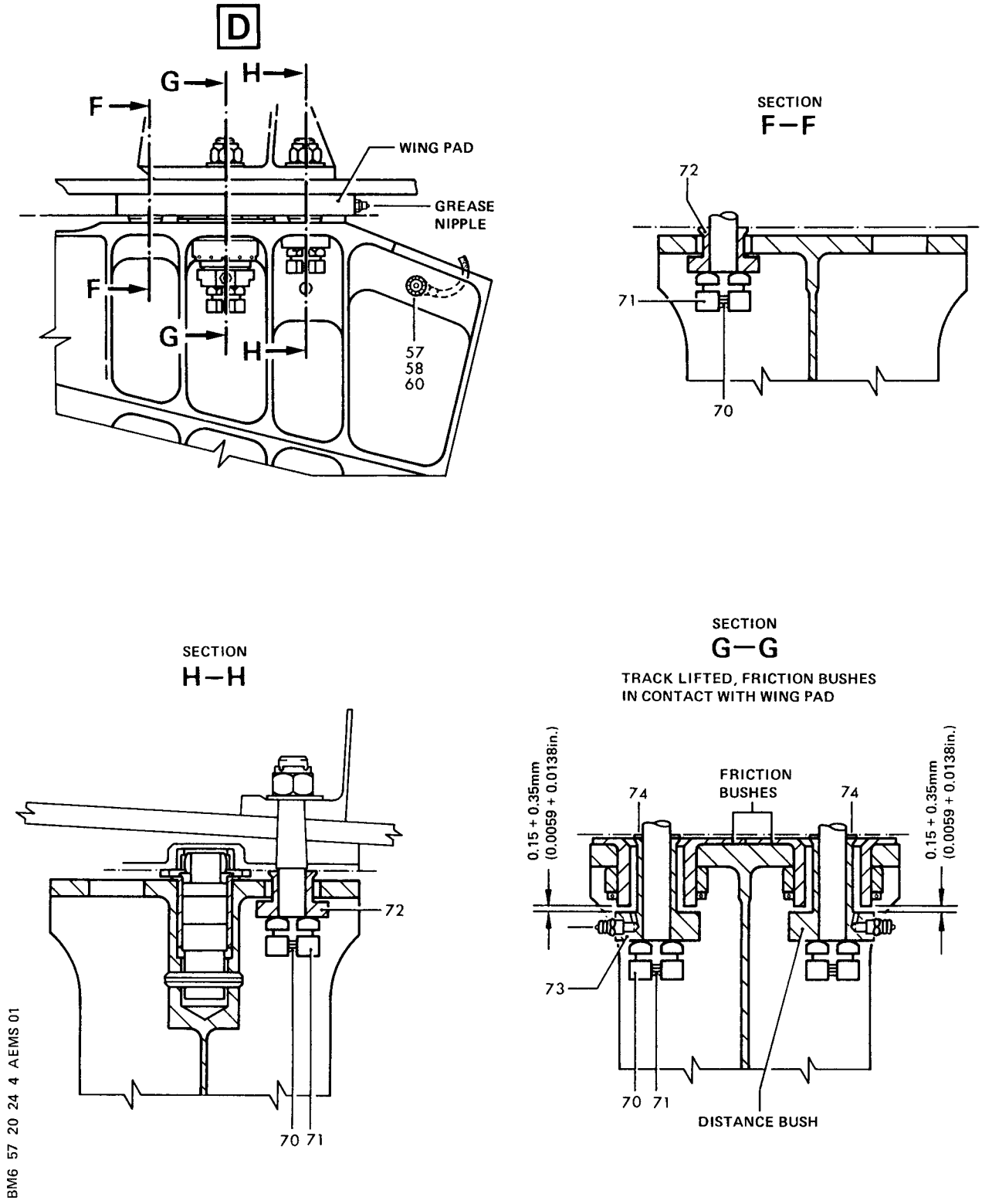
SECTION
E – E

TRACK 5 IS SHOWN
TRACKS 3 AND 4 ARE SIMILAR



BM3 57 20 24 4 AEMJ

Flap Track/Beams 3 thru 5
(Sheet 2/3)
Figure 404



Flap Track/Beams 3 thru 5
(Sheet 3/3)
Figure 404

WARNING : - THE APPROXIMATE WEIGHT OF EACH FLAP TRACK IS AS FOLLOWS:
TRACK 3 : 65 KG (143 LBS.)
TRACK 4 : 72 KG (159 LBS.)
TRACK 5 : 42 KG (93 LBS.)
- THE APPROXIMATE WEIGHT OF EACH CARRIAGE IS AS FOLLOWS:
CARRIAGE 3 : 37 KG (81 LBS.)
CARRIAGE 4 : 32 KG (70 LBS.)
CARRIAGE 5 : 27 KG (59 LBS.)

(a)For track 5 only:
Remove screw (76) and carefully secure hydraulic lines clear of flap track.

R (b)Prepare flap track hoisting device PN 98A57208666000 for removal of relevant flap track (Ref. Fig. 403).

NOTE : Ensure that carriage is secured to track in zero position. with rigging pin PN 98A27508003000.

(c)Using a crane carefully position hoisting device under the flap track. Take care not to damage wing structure.
(d)Attach hoisting device to flap track.
(e)Remove nuts (57), washers (58),(59), screws (60) and disconnect bonding straps.
(f)Remove cotter pins (61), castle nuts (62),(75) , washers (63), bolts (65) and bushes (66),(67) at forward mounting.

NOTE : Do not remove bolt (64) at this stage.

(g)Using STA-LOK extraction tool PN SL90-350-5000 remove tab washer (70).
(h)Make certain that track is supported by crane. Carefully remove nuts (71) using socket wrench PN 98A27508038000.
(j)Remove bushes (72),(73) and special washers (74). Remove bolt (64) from forward mounting.

NOTE : Record position of special washers (74).

(k)Lower flap track and manoeuver it clear of wing.
(l)Remove bushes (68) and (69).

NOTE : Record position of bushes for replacement.

(m)Remove flap track complete with carriage from hoisting device.
(n)Remove relevant carriage
(carriage 3, Ref. 27-54-27, P. Block 401;
carriage 4, Ref. 27-54-28, P. Block 401;
carriage 5, Ref. 27-54-29, P. Block 401)

NOTE : Removal of the carriage is only necessary if a new flap track is to be installed.

C. Installation

(1)Flap track/beam 1
(Ref. Fig. 401) (Sheets 1 and 2)

WARNING : BEFORE INSTALLING FLAP TRACK/BEAM (A MINIMUM OF) TWO OPERATIVES MUST BE SUITABLY POSITIONED TO SUPPORT AND INSTALL FLAP TRACK/BEAM.

(a)Apply anti-corrosion compound (Material No. 05-002) to bolt (8).
(b)Position flap track/beam and fitting assembly. Install bolt (8), tab washer (7) and screw (6). Do not tighten at this stage.
(c)Apply anti-corrosion compound (Material No. 05-002) to bolt (25).
(d)Position flap track/beam and fitting assembly. Install bolt (25), tab washer (24) and screw (23). TORQUE screw (23) to between 0.75 and 0.8 m.daN (5.5 and 5.9 lbf.ft.).
(e)Safety with tab washer (24).
(f)TORQUE screw (6) to between 0.35 and 0.4 m.daN (2.6 and 3 lbf.ft.).
(g)Safety with tab washer (7).
(h)Apply anti-corrosion compound (Material No. 05-002) to bush (2).
(j)Apply lubricant (Material No. 06-002) to thread of bolt (1) and apply anti-corrosion compound (Material No. 05-002) to shank of bolt (1).
(k)Position damper assembly on flap track/beam. Install bush (2), bolt (1), washer (3) and castle nut (5). TORQUE castle nut (5) to between 0.2 and 0.35 m.daN (1.5 and 2.6 lbf.ft.). Safety with cotter pin (4).
(l)Apply anti-corrosion compound (Material No. 05-002) to bolt (28).
(m)Position rear rod assembly on flap track/beam. Install bolt (28), tab washer (27) and screw (26). TORQUE screw (26) to between 0.75 and 0.8 m.daN (5.5 and 5.9 lbf.ft.).
(n)Safety with tab washer (27).
(p)Apply anti-corrosion compound (Material No. 05-002) to bolt (21).
(q)Position fitting assembly on flap track/beam. Install tooth plate (22), bolt (21), tab washer (19) and screw (20). TORQUE screw (20) to between 0.35 and 0.4 m.daN (2.6 and 3.0 lbf.ft.).
(r)Safety with tab washer (19).
(s)Position adjustable link assembly on flap track/beam. If holes are misaligned, adjust adjustable lever assembly as follows:
1 Release lock washers (9) and (12).
2 Loosen locking nuts (10) and (11) until removal of bolt (18) is possible.
3 Remove bolt (18).
4 Remove and discard lock washers (9) and (12).
5 Install new lock washers (9) and (12) on bolt (18).
6 Install bolt (18) and adjust until adjustable link assembly and flap track/beam holes are aligned.
7 TORQUE locking nuts (10) and (11) to between 3.5 and 4.0 m.daN (25.8 and 30.0 lbf.ft.). Make certain that "a" and "b" are equal to within ± 0.8 mm (± 0.031 in.). Maximum gap allowed for "a" or "b" is 12.75 mm (0.502 in.). Minimum gap allowed is 7.75 mm (0.305 in.).
8 Safety with lock washers (9) and (12).
(t)Apply anti-corrosion compound (Material No. 05-002) to bush (14) and

bolt (13).
(u)Install bush (14), bolt (13), washer (15) and castle nut (17). TORQUE castle nut (17) to between 2.0 and 3.3 m.daN (14.8 and 24.3 lbf.ft.).
(v)Safety with cotter pin (16).
(w)Position bonding strap; install washer (30), bolt (29), washer (31), nut (32) and tighten.
(x)Apply sealant (Material No. 09-013) over bonding connection (Ref. 20-28-11, P. Block 1).
(y)Install carriage 1 on flap track/beam (Ref. 27-54-25, P. Block 401).
(z)Remove crane or gantry from inboard flap lifting attachment point.
(aa)Remove safety clips and tags and close circuit breakers 5CV, 6CV and 10CV.
(ab)Remove safety guard from flap/slat control lever quadrant.
(ac)Retract flaps to 0° position (Ref. 27-50-00, P. Block 301).

(2)Flap track/beam 2
(Ref. Fig. 402) (Sheets 1 and 2)
(a)Install carriage 2 (Ref. 27-54-26, P. Block 401) on flap track beam and secure with rigging pin.
(b)Position flap track complete with carriage in hoisting device
R PN 98A57208666000 (Ref. Fig. 403).
(c)Wet assemble bushes (38),(39) into forward track pick-up point with anti-corrosion compound (Material No. 05-002).
(d)Apply anti-corrosion compound (Material No. 05-002) to fill space between track structure and bolt.
(e)Using a crane, lift hoisting device with flap track and carriage and position under wing.
(f)Align forward pick-up points and install bolt (40) coated with anti-corrosion compound (Material No. 05-002). Make certain that stay bolts on wing pad align with holes in track.
(g)Coat thread of bolt (40) with lubricant (Material No. 06-002).
(h)Install washer (38) and castle nut (36). Do not tighten at this stage.
(j)Align track and insert bushes (53),(54) and install special washers (55) and nuts (52). Do not fully tighten nuts at this stage.
(k)Remove hoisting device from track.
(l)TORQUE four nuts (52) to between 19 and 23 m.daN (140 and 170 lbf.ft.). Use holding tool PN 98A27508041000 to prevent rotation of friction bush.
(m)Carefully lift up the rear part of track until friction bushes and wing pad have contact.
(n)Measure gap between distance bush (53) and friction bush. Make certain that friction bush is in contact with wing pad.
Gap must be 0.15 + 0.15 mm (0.0059 + 0.0059 in.).
(p)If required gap is not obtained, replace existing special washer (55) by a special washer of suitable thickness.

NOTE : Five special washers are available with following thickness:
0.67 mm (0.0264 in.)
0.77 mm (0.0303 in.)
0.87 mm (0.0343 in.)
0.97 mm (0.0382 in.)

1.07 mm (0.042 in.)

(q)If special washers have been changed, TORQUE nuts (52) to between 19 and 23 m.daN (140 and 170 lbf.ft.).
(r)Wet assemble bushes (44),(45) and bolt (46) into forward mounting with anti-corrosion compound (Material No. 05-002).
(s)Coat thread of bolt (46) with lubricant (Material No. 06-002).
(t)Install washer (43) and castle nut (42). Do not tighten at this stage.
(u)Using STA-LOK installation tool PN SL90-349-6875 install tab washer (51).
(v)Apply corrosion preventive (Material No. 05-005) on STA LOC parts (51) and (52).
(w)TORQUE nuts (36) to between 45 and 75 m.daN (332 and 553 lbf.ft.) and safety with cotter pins (35).
(x)TORQUE nuts (42) to between 20 and 40 m.daN (148 and 295 lbf.ft.) and safety with cotter pins (41).
(y)Install bonding straps (Ref. 20-28-11, P. Block 1); secure with screws (47), washers (49),(50) and nuts (48). Apply sealant (Material No. 09-013) to connections.
(z)Lubricate aft track mounting (Ref. 12-22-27, P. Block 1).
(aa)Install inboard flap (Ref. 27-50-11, P. Block 401).

(3)Flap track/beams 3 thru 5
(Ref. Fig. 404) (Sheets 1, 2 and 3)
(a)Install relevant carriage on flap/track beam
(Ref. 27-54-27, P. Block 401 - Carriage 3
27-54-28, P. Block 401 - Carriage 4
27-54-29, P. Block 401 - Carriage 5)
(b)Position flap track complete with carriage in hoisting device
R PN 98A57208666000 (Ref. Fig. 403).
(c)Wet assemble bushes (68) and (69) into forward flap track pick-up point with anti-corrosion compound (Material No. 05-002).
(d)Apply anti-corrosion compound (Material No. 05-002) to fill space between bolt and track structure.
(e)Using a crane, lift hoisting device with flap track and position it under wing.
(f)Align forward pick-up points and install bolt (64) coated with anti-corrosion compound (Material No. 05-002). Make certain that stay bolts on wing pad align with holes in track.
(g)Coat thread of bolt (64) with lubricant (Material No. 06-002).
(h)Install washer (63) and castle nut (62). Do not tighten at this stage.
(j)Align track, insert bushes (72),(73) and install special washers (74) and nuts (71). Do not fully tighten nuts at this stage.
(k)Remove hoisting device from track.
(l)TORQUE nuts (71) to between 7.7 and 8.5 m.daN (57 and 63 lbf.ft.). Use holding tool PN 98A27508041000 to prevent rotation of friction bush.
(m)Carefully lift up the rear part of track until friction bushes and wing pad are in contact.
(n)Measure gap between distance bush (73) and friction bush. Make

certain that friction bush is in contact with wing pad.
- Gap must be 0.15 + 0.35 mm (0.0059 + 0.0138 in.).

(p)If required gap is not obtained, replace special washer (74) by a special washer of suitable thickness.

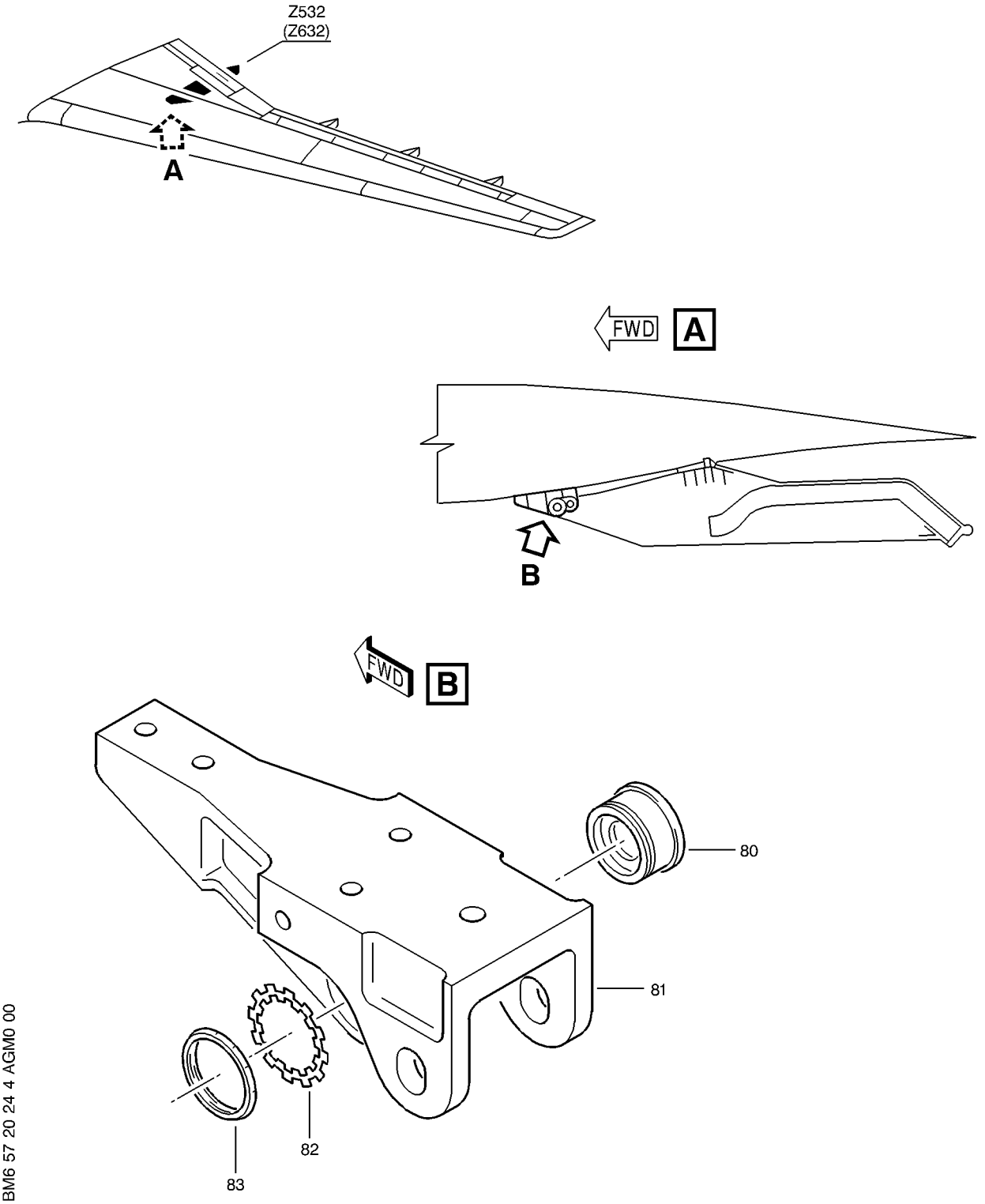
NOTE : Five special washers are available with following thicknesses:
0.67 mm (0.0264 in.)
0.77 mm (0.0303 in.)
0.87 mm (0.0342 in.)
0.97 mm (0.0382 in.)
1.07 mm (0.042 in.)

(q)If special washers have been changed, TORQUE nuts (71) to between 7.7 and 8.5 m.daN (57 and 63 lbf.ft.).
(r)Wet assemble bushes (66),(67) and bolt (65) into forward mounting with anti-corrosion compound (Material No. 05-002).
(s)Coat thread of bolt (65) with lubricant (Material No. 06-002).
(t)Install washer (61) and castle nut (62),(75). Do not tighten at this stage.
(u)Using STA-Lok installation tool PN SL90-349-5000 install tab washer (70).
(v)Apply corrosion preventive (Material No. 05-005) on STA LOC parts (70) and (71).
(w)TORQUE nuts (62) to between 25 and 35 m.daN (184 and 258 lbf.ft.) and safety with cotter pin (61).
(x)TORQUE nuts (62) at track 3 to between 12 and 24 m.daN (88.5 and 177 lbf.ft.).
TORQUE nuts (75) at tracks 4 and 5 to between 7 and 13 m.daN (52 and 96 lbf.ft.) and safety nut with cotter pin (61).
(y)Install bonding straps (Ref. 20-28-11, P. Block 1) with screws (60), washers (58),(59) and nuts (57). Apply sealant (Material No. 09-013) to connections.
(z)Lubricate aft track mounting (Ref. 12-22-27, P. Block 1).
(aa)Only flap track 5:
Secure hydraulic lines to flap track bracket using screw (76).
(ab)Install outboard flap (Ref. 27-50-12, P. Block 401).

(4)Flap track/beams 2 thru 5
(a)Remove safety clips and tags and close circuit breakers 5CV, 6CV and 10CV.
(b)Remove safety guard from flap/slat control lever quadrant.

D. Flap/Track No. 2 - Forward Attachment Bearing
(1)Removal of the spherical bearing (80).
(Ref. Fig. 405)
NOTE : Some spherical bearings (80) do not have a spanner retaining slot. In this case, a hook spanner cannot be used and the spherical bearing (80) must be held by other means, while you release the retaining nut (83).

(a)Remove the fillets of sealant from around the head of the spherical bearing (80) and the retaining nut (83) using a non-



Flap Track/Beam No. 2 - Forward Attachment
Figure 405

R

metallic scraper and cleaning agent (Material No. 11-004), as required.

(b) Disengage the tabs of the lock washer (82) from the slots in retaining nut (83).

(c) Use the hook spanner to remove the retaining nut (83).

(d) Remove the lock washer (82).

(e) Remove the spherical bearing (80), refer to SRM 51-72-20, P. Block 201.

(2) Installation of the spherical bearing (80).

NOTE : If available, install a new spherical bearing (80), which has a retaining slot. This will accommodate a hook spanner and enable torque tightening of the retaining nut (83).

(a) Thoroughly clean the bore and bearing faces of the forward attachment (81) and the surfaces of the spherical bearing (80), the retaining nut (83), and the lock washer (82) using lint free cloth and cleaning agent (Material No. 11-004).

(b) Partially bend the locking tabs of the lock washer (82) before assembly, to assist engagement of the tabs after torque loading the retaining nut (83).

(c) Apply sealant (Material No. 09-018) to:

1 The bearing surfaces of the forward attachment (81) of the track.

2 Under the head and on the mating surfaces of the spherical bearing (80).

3 The mating surfaces of the retaining nut (83) and lock washer (82).

NOTE : Make certain that the bearing is not contaminated with sealant (Material No. 09-018).

(d) Install the spherical bearing (80) in the forward attachment (81) of the track, refer to SRM 51-72-20, P. Block 201.

(e) Install the lock washer (82) with the tabs pointing outwards, and the inner tab engaged in the spherical bearing (80) keyway.

CAUTION : THE INITIAL AND FINAL TORQUE LOADING OPERATION MUST BE CARRIED OUT WITHIN THE CURING TIME OF THE SEALANT.

(f) Install the retaining nut (83) onto the spherical bearing (80) with the chamfered face towards the lock washer (82).

1 For spherical bearings (80) without a spanner retaining slot:

- Torque tighten the retaining nut (83) to between 13.56 and 20.34 m.daN (100 and 150 lbf.ft.) and record the torque loading.
- Check the recorded figures at two-hourly intervals, re-torque the retaining nut (83) as required, until the torque loading figures are the same as the previous reading.
- Secure the retaining nut (83) with the tabs of the lock washer (82), increasing the torque if necessary to align the tabs of the lock washer (82) with the slots in the retaining nut (83).

2 For spherical bearings (80) with a retaining slot:

- Using a hook spanner, torque the retaining nut (83) to between

13.56 and 20.34 m.daN (100 and 150 lbf.ft.) and record the torque loading.
- Check the recorded figures at two-hourly intervals, re-torque the retaining nut (83) as required, until the torque loading figures are the same as the previous reading.
- Secure the retaining nut (83) with the tabs of the lock washer (82), increasing the torque if necessary to align the tabs of the lockwasher (82) with the slots in the retaining nut (83).

3 Apply a fillet of sealant (Material No. 09-018) around the retaining nut (83) and the head of the spherical bearing (80).

(g) Remove the unwanted sealant from the forward attachment and the bearing assembly using a lint free cloth and cleaning agent (Material No. 11-004).

E. Flap/Track Nos. 3-5 - Forward Attachment Bearing

(1) Removal of the spherical bearing (88).
(Ref. Fig. 406)

NOTE : Some spherical bearings (88) do not have a spanner retaining slot. In this case, a hook spanner cannot be used and the spherical bearing (88) must be held by other means, while you release the retaining nut (85).

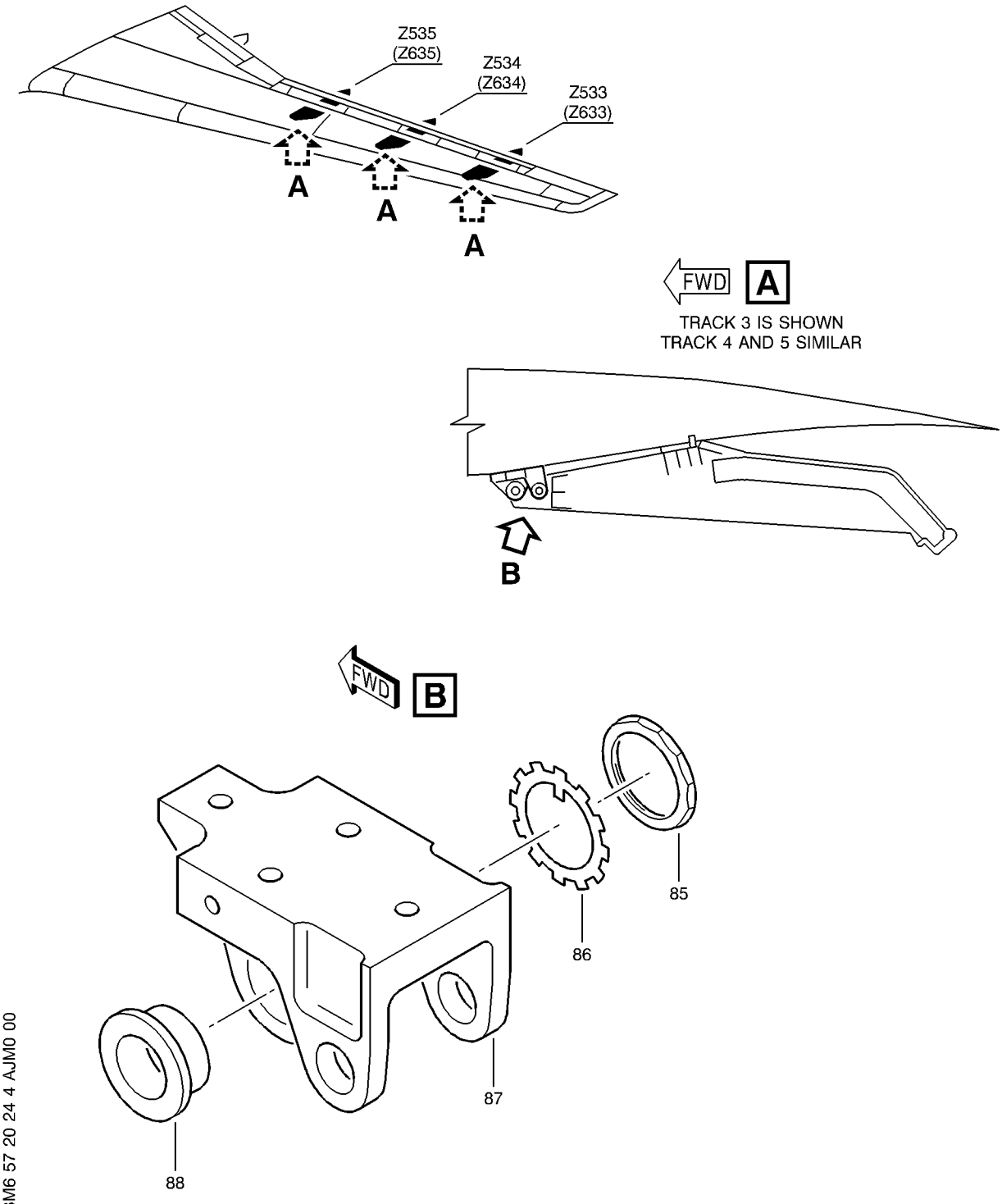
(a) Remove the fillets of sealant from around the head of the spherical bearing (88) and the retaining nut (85) using a non-metallic scraper and cleaning agent (Material No. 11-004), as required.
(b) Disengage the tabs of the lock washer (86) from the slots in retaining nut (85).
(c) Use the hook spanner to remove the retaining nut (85).
(d) Remove the lock washer (86).
(e) Remove the spherical bearing (88), refer to SRM 51-72-20, P. Block 201.

(2) Installation of the spherical bearing (88).

NOTE : If available, install a new spherical bearing (88), which has a retaining slot. This will accommodate a hook spanner and enable torque tightening of the retaining nut (85).

(a) Thoroughly clean the bore and bearing faces of the forward attachment (87) and the surfaces of the spherical bearing (88), the retaining nut (85), and the lock washer (86) using lint free cloth and cleaning agent (Material No. 11-004).
(b) Partially bend the locking tabs of the lock washer (86) before assembly, to assist engagement of the tabs after torque loading the retaining nut (85).
(c) Apply sealant (Material No. 09-018) to:

1 The bearing surfaces of the forward attachment (87) of the track.
2 Under the head and on the mating surfaces of the spherical bearing (88).
3 The mating surfaces of the retaining nut (85) and lock washer (86).



Flap Track/Beams 3 thru 5 - Forward Attachment
Figure 406

R

R NOTE : Make certain that the bearing is not contaminated with
R sealant (Material No. 09-018).

R (d)Install the spherical bearing (88) in the forward attachment (87)
R of the track, refer to SRM 51-72-20, P. Block 201.
R (e)Install the lock washer (86) with the tabs pointing outwards,
R and the inner tab engaged in the spherical bearing (88) keyway.

R CAUTION : THE INITIAL AND FINAL TORQUE LOADING OPERATION MUST BE CARRIED
R OUT WITHIN THE CURING TIME OF THE SEALANT.

R (f)Install the retaining nut (85) onto the spherical bearing (88) with
R the chamfered face towards the lock washer (86).
R 1 For spherical bearings (88) without a spanner retaining slot:
R - Torque tighten the retaining nut (85) to between 2.3 and
R 3.1 m.daN (17 and 23 lbf.ft.) and record the torque loading.
R - Check the recorded figures at two-hourly intervals, re-torque the
R retaining nut (85) as required, until the torque loading figures
R are the same as the previous reading.
R - Secure the retaining nut (85) with the tabs of the lock washer (86),
R increasing the torque if necessary to align the tabs of the lock
R washer (86) with the slots in the retaining nut (85).
R 2 For spherical bearings (88) with a retaining slot:
R - Using a hook spanner, torque the retaining nut (85) to between
R 2.3 and 3.1 m.daN (17 and 23 lbf.ft.) and record the
R torque loading.
R - Check the recorded figures at two-hourly intervals, re-torque
R the retaining nut (85) as required, until the torque loading
R figures are the same as the previous reading.
R - Secure the retaining nut (85) with the tabs of the lock washer
R (86), increasing the torque if necessary to align the tabs of
R the lockwasher (86) with the slots in the retaining nut (85).
R 3 Apply a fillet of sealant (Material No. 09-018) around the
R retaining nut (85) and the head of the spherical bearing (88).
R (g)Remove the unwanted sealant from the forward attachment and the
R bearing assembly using a lint free cloth and cleaning agent
R (Material No. 11-004).

R F. Test

R NOTE : To facilitate checking of flap operation, use only one hydraulic
R system (GREEN or YELLOW) so that system operates at half speed.

R (1)Flap track/beams 1 and 2
R (a)Carry out an operational test of flap system (Ref. 27-54-00) and
R observe during operation inboard flap and carriages 1 and 2 for
R correct movement in the tracks.
R (2)Flap track/beams 3 thru 5
R (a)Carry out an operational test of flap system (Ref. 27-54-00) and
R observe during operation outboard flap and carriages 3 thru 5 for
R correct movement in the tracks.

R G. Close-Up
R (1)Flap track/beam 1
R (a)Install access panel 572AB (672AB)
R (2)Flap track/beams 2 thru 5
R (a)Install fairing side load stay (Ref. 27-50-23, P. Block 401).
R (b)Install fairing operating rod (Ref. 27-50-22, P. Block 401).
R (c)Install flap track fixed fairing (Ref. 57-20-35, P. Block 401).
R (d)Install flap track moveable fairing (Ref. 27-50-21, P. Block 401).
R (3)Remove safety barriers.
R (4)Remove access platform.

WARNING : CHECK THAT LANDING GEAR GROUND SAFETIES INCLUDING WHEEL CHOCKS ARE IN POSITION.

WARNING : BEFORE APPLYING OR RELIEVING HYDRAULIC SYSTEM PRESSURE MAKE CERTAIN THAT THE TRAVEL RANGES OF THE CONTROL SURFACES ARE CLEAR.

WARNING : BEFORE PRESSURIZING HYDRAULIC SYSTEMS, CHECK THAT ALL CONTROLS ARE SET TO CORRESPOND WITH THE ACTUAL POSITION OF THE SERVICES THEY OPERATE.

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENTS, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

1. Flap Track/Beams 1 thru 5 - General Check

A. Reason for the Job

(1)To inspect flap track/beams for general condition and security.
(2)To measure gap at flap track/beams 2 thru 5.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 3.1 to 4.3 m (10 to 14 ft.)
(2)98A27503003000	Guard - Safety, Flap/Slat Ctl Lever
(3)	Feeler Gage
(4)	Safety Barriers
(5)	Circuit Breaker Safety Clips and Tags

Referenced Procedure

	- 27-50-00, P. Block 301	Flaps
R	- 57-20-24, P. Block 401	Beams Removal/Installation

C. Procedure

(1)Job Set-Up
(a)Position safety barriers.
(b)Extend flaps to 40° position (Ref. 27-50-00, P. Block 301).
(c)Install safety guard PN 98A27503003000 on flap/slat control lever quadrant.
(d)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 2	6CV	331/V61
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 1	5CV	332/U61
133VU	FLT CTL/SFCC/LAND RECOVERY/SUPPLY/ FLAPS/SYS 1	10CV	335/R67

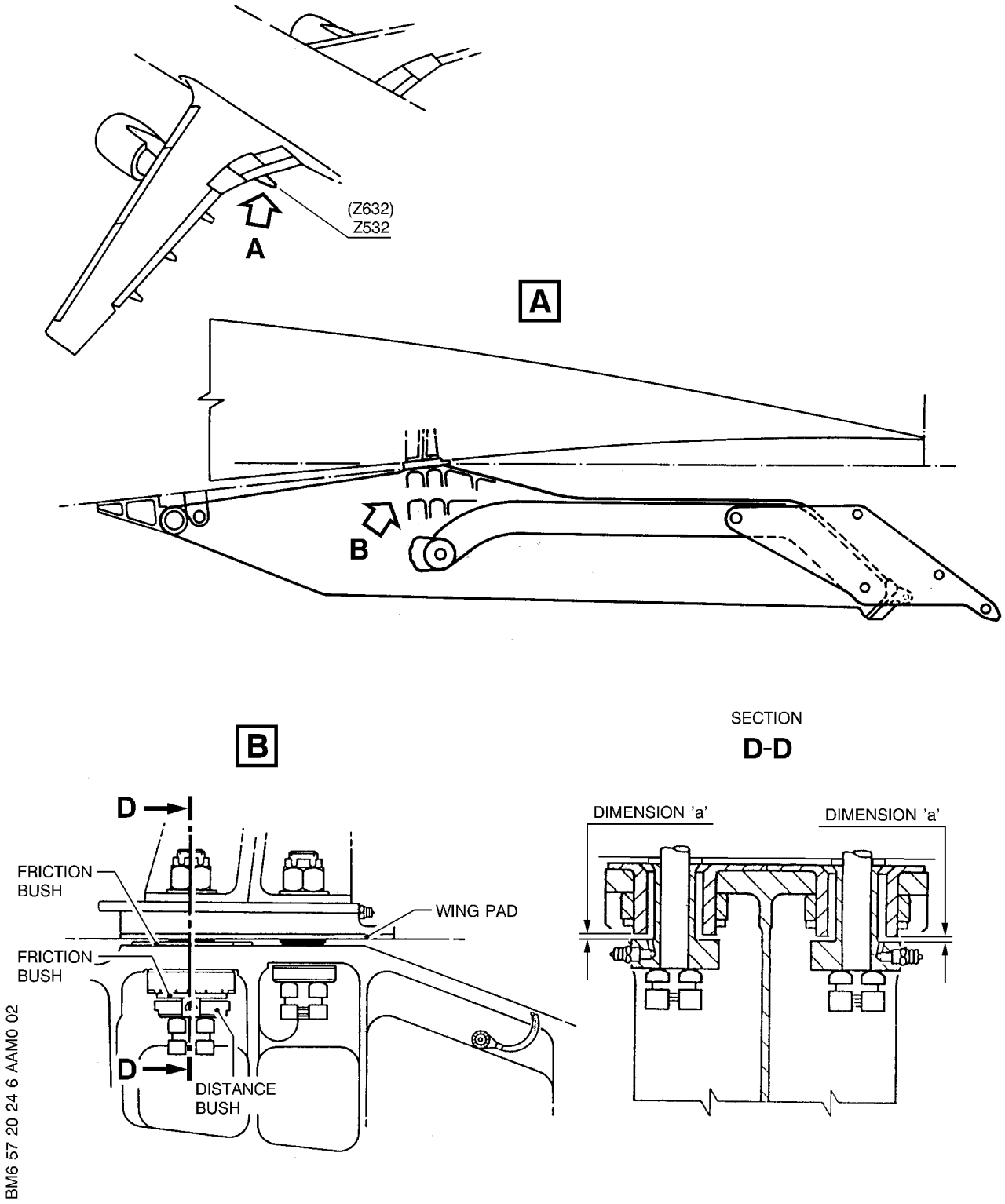
(e)Position access platform.

(2)Flap Track/Beams 1 thru 5
(a)Inspect flap track/beams for corrosion, excessive wear, cracks or any other damage.
(b)At attachment points of flap track/beams, check that:
- all nuts and bolts are properly tightened.
- all nuts and bolts are in satisfactory condition (no corrosion).
(c)Check that all safety devices are intact.
(d)Check that all fitting assemblies are in satisfactory condition (no corrosion).

(3)Measurement of Gap between Distance Bush and Friction Bush at Aft Mounting of Flap Track/Beams 2 thru 5
(Ref. Fig. 601)
(Ref. Fig. 602)
(a)Measure gap using feeler gage between friction bushes and distance bush LH and RH.
- Dimension "a" at flap track/beam 2 must be between 0.15 and 0.30 mm (0.0059 and 0.0118 in.).
- Dimension "b" at flap track/beams 3 thru 5 must be between 0.15 and 0.50 mm (0.0059 and 0.0197 in.).

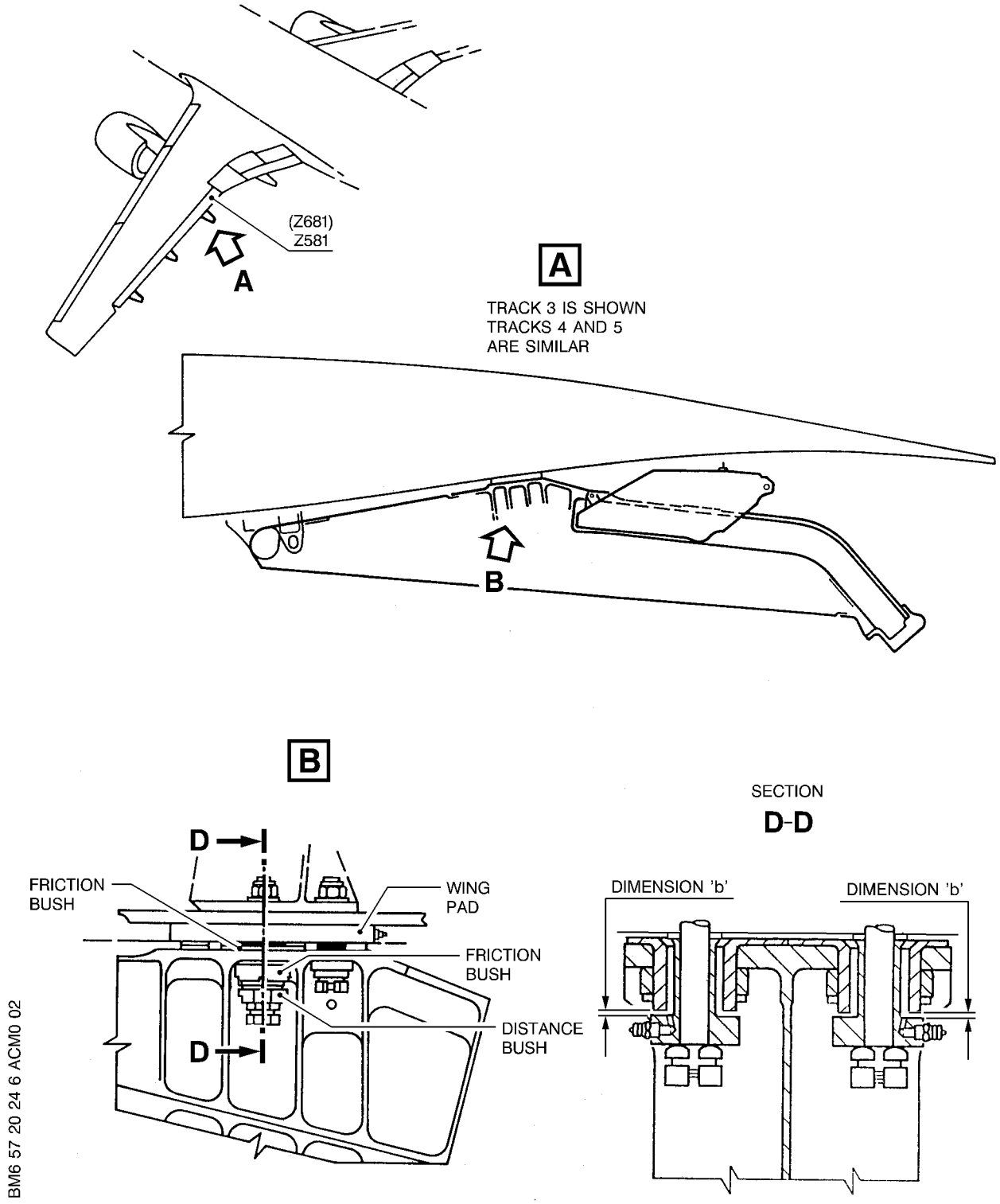
R NOTE : Carefully lift up the rear part of the track. Make sure that the
R friction bush is in contact with the wing pad (Ref. 57-20-24,
R P. Block 401).
R If required gap is not obtained, replace existing special washer
R by a special washer of suitable thickness (Ref. 57-20-24,
R P. Block 401).

(4)Close-Up
(a)Remove safety clips and tags and close the following circuit breakers: 5CV, 6CV and 10CV.
(b)Remove safety guard from flap/slat control lever quadrant.
(c)Retract flaps to 0° position (Ref. 27-50-00, P. Block 301).
(d)Remove access platform.
(e)Remove safety barriers.
(f)Remove all ground handling and maintenance equipment, standard and special tools, together with ground power equipment, all access equipment and miscellaneous items.



Aft Mounting of Flap Track/Beam 2
Figure 601

R



Aft Mounting of Flap Track/Beams 3 thru 5
Figure 602

R

RAM AIR TURBINE - YOKE ATTACHMENT FITTING - REMOVAL/INSTALLATION

WARNING : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND CHOCKS ARE IN POSITION.

FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE IN POSITION.

MAKE SURE THAT THE FIRE FIGHTING EQUIPMENT IS AVAILABLE AND ADEQUATE.

MAKE SURE THAT YOU ISOLATE THE ELECTRICAL CIRCUITS UPON WHICH WORK IS IN PROGRESS.

POSITION THE SAFETY BARRIERS AND DISPLAY WARNING NOTICES AROUND THE RAT EXTENSION AREA.

BE CAREFUL WHEN YOU USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER MATERIALS. OBEY THE MATERIAL MANUFACTURER'S INSTRUCTIONS AND LOCAL REGULATIONS. MAKE SURE THERE IS A GOOD FLOW OF AIR THROUGH THE WORK AREA.
DO NOT BREATHE THE FUMES.
DO NOT SMOKE.
DO NOT USE THESE MATERIALS NEAR A FLAME, SPARKS OR SOURCES OF HEAT.
USE PROTECTIVE CLOTHING, GOGGLES AND GLOVES.
IF YOU GET ONE OF THESE MATERIALS:
- ON YOUR SKIN OR IN YOUR EYES, FLUSH IT AWAY WITH A FLOW OF CLEAN WATER.
- IN YOUR MOUTH, GET IMMEDIATE MEDICAL AID.
IN GENERAL THESE MATERIALS ARE POISONOUS, FLAMMABLE AND SKIN IRRITANTS.

1. Reason for the Job

- To replace a Ram Air Turbine (RAT) yoke attachment fitting.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.6m (8 ft. 7 in.)
B.	Torque Wrench 0.75 to 0.90 m.daN (66.3 - 79.6 lbf.in.)
C.	Drilling Bush
D. 98A5720300300	Positioning Tool
E.	Flashlight
F.	Inspection - Mirror, Flexible
G	Lint-free Cloth
H. Material No. 09-001	Sealant
J. Material No. 11-026	Cleaning Agents (Ref. 20-31-00)

NOTE: the drilling bush and the positioning tool are only necessary for the installation of a new (undrilled) fork fitting (3).

ITEM	DESIGNATION
Referenced Procedure	
- 29-25-00, P. Block 501	Yellow Auxillary Power (Ram Air Turbine)
- 29-25-27, P. Block 401	Ram Air Turbine
- 32-12-11, P. Block 301	Main Gear Main Door

3. Procedure

(Ref. Fig. 401)

A. Job Set-Up
(1)Open the right main-gear door (Ref. 32-12-11, P. Block 301) and install the safety collars.
(2)Put the access platform in position under the Ram Air Turbine extention Door.
(3)Remove the access panel 671DB.
(4)Remove the Ram Air Turbine (Ref. 29-25-27, P. Block 401).

B. Removal
(1)Make sure that you do the correct removal procedure:
- Procedure for the same (re-used) fork fitting (3)
- procedure for a new (undrilled) fork fitting (3).

(a)Procedure for the same (re-used) fork fitting (3):
1 Get access to the RAT fork fitting (3).
2 Record the position of the fork fitting (3).
3 Remove the nuts (1) and the bolts (2) from the structure.
4 Remove the fork fitting (3).

(b)Procedure for a new (undrilled) fork fitting (3):
1 Get access to the RAT fork fitting (3).

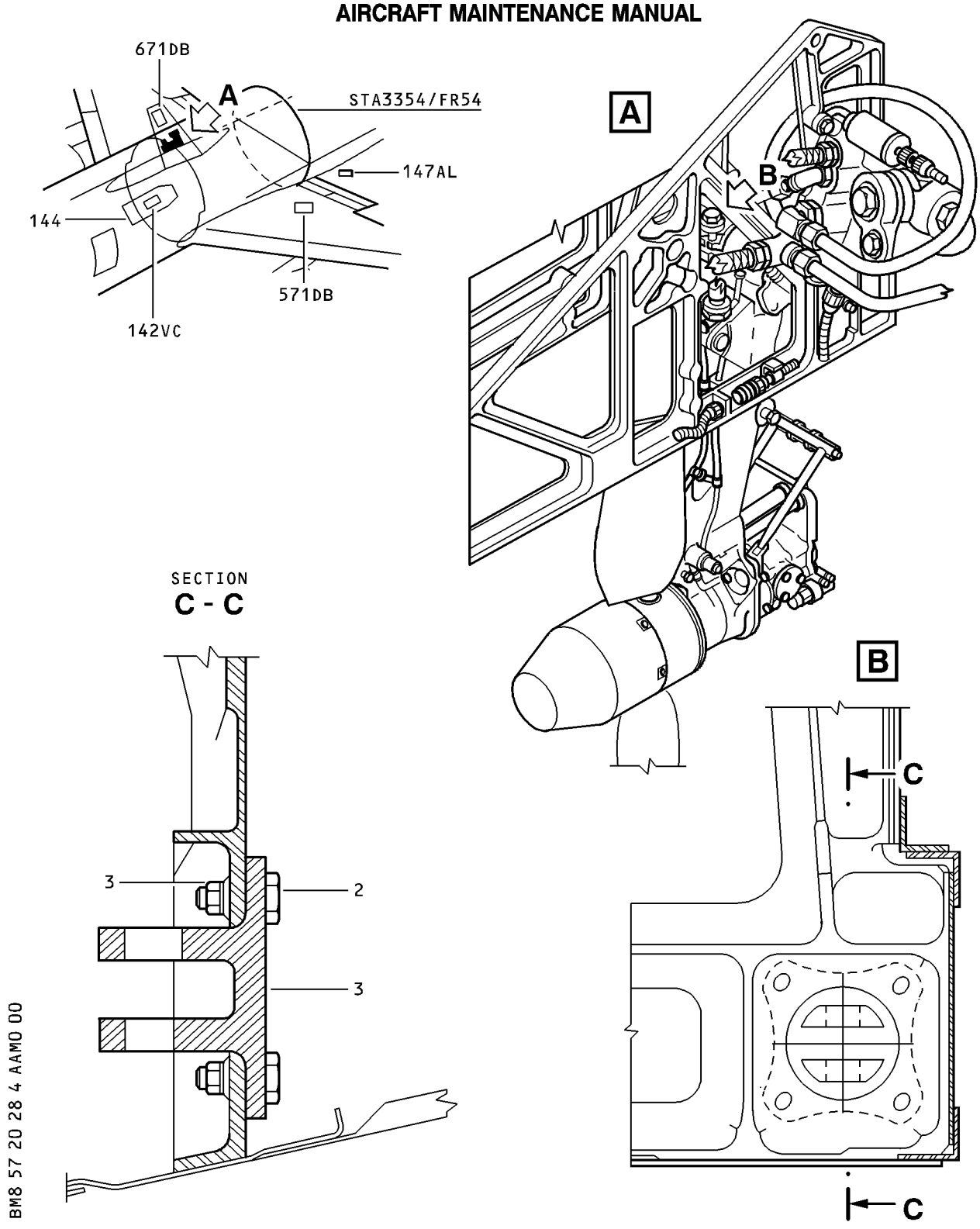
CAUTION: DO NOT REMOVE THE POSITIONING TOOL AS LONG AS THE FORK FITTING (3) IS NOT INSTALLED.

2 Install the positioning tool.

NOTE: Follow the instructions that are given in the handbook of the tool container.

3 Remove the nuts (1) and the bolts (2) from the structure.
4 Remove the fork fitting (3).

C. Preparation for Installation
(1)Make sure that you do the correct preparation procedure for the installation:
- Procedure for the same (re-used) fork fitting (3)
- procedure for a new (undrilled) fork fitting (3).



Yoke Attachment Fitting - Removal/Installation
Figure 401

(a)Procedure for the same (re-used) fork fitting (3):

WARNING: BE CAREFUL WHEN YOU USE THE CLEANING MATERIAL. OBEY THE MATERIAL MANUFACTURER'S INSTRUCTIONS.

1 Clean the surface of the fork fitting (3) and the installation area with a lint-free cloth and cleaning agent (Material No. 11-026).
2 Use a flashlight and a flexible inspection-mirror and inspect the holes of the fork fitting (3) and the four holes in the structure.
3 Make sure that the holes are free of cracks and corrosion

NOTE: Should crack formation be suspected, an approved non-destructive test must be carried out. If cracks or corrosion are found and these damages cannot be removed during the installation procedure, prepare a damage report and contact Airbus Industrie for a repair instruction.

(b)Procedure for a new (undrilled) fork fitting (3):

WARNING: BE CAREFUL WHEN YOU USE THE CLEANING MATERIAL. OBEY THE MATERIAL MANUFACTURER'S INSTRUCTIONS.

1 Clean the surface of the fork fitting (3) and the installation area with a lint-free cloth and cleaning agent (Material No. 11-026).
2 Use a flashlight and a flexible inspection-mirror and inspect the four holes in the structure.
3 Make sure that the holes are free of cracks and corrosion

NOTE: Should crack formation be suspected, an approved non-destructive test must be carried out. If cracks or corrosion are found and these damages cannot be removed during the installation procedure, prepare a damage report and contact Airbus Industrie for a repair instruction.

4 Measure and record the diameter of the four holes in the structure for the fork fitting (3) attachment.

NOTE: If one or more diameters are greater than 7.10 mm (0.28 in), contact Airbus Industrie for a repair instruction.

5 Use the positioning tool to install the fork fitting (3) on the structure.

NOTE: Follow the instructions that are given in the handbook of the tool container.

6 Use the drilling bush to drill the four holes on the fork fitting (3) to match the holes of the structure.
7 Remove the fork fitting (3).
8 Drill the four holes on the fork fitting (3) to the diameter previously recorded.

9 Remove and deburr the fork fitting (3).

D. Installation

(1)Make sure that you do the correct installation procedure for the fork fitting:
- Procedure for the same (re-used) fork fitting (3)
- procedure for a new (undrilled) fork fitting (3).

(a)Procedure for the same (re-used) fork fitting (3):
1 Install the fork fitting (3) on the structure as previously recorded.
2 Check the position and make sure that there is no gap between the fork fitting (3) and the structure.
3 Install the bolts (2) with the sealant (Material No 09-001) and the nuts (1).
4 Torque the nuts (1) to between 0.75 and 0.90 m.daN (66.3 - 79.6 lbf.in.).

(b)Procedure for a new (undrilled) fork fitting (3).
1 Use the positioning tool to install the fork fitting (3) on the structure.

NOTE: Follow the instructions that are given in the handbook of the tool container.

2 Check the position and make sure that there is no gap between the fork fitting (3) and the structure.

CAUTION: MAKE SURE THAT THE MINIMUM EDGE MARGIN OF THE STRUCTURE AND THE FORK FITTING IS 10.000 mm (0.400 in.). THEREFORE THE MAXIMUIM ALLOWABLE OVERSIZE DIAMETER IS 7.141 mm (0.281 in.). BEYOND THIS DIAMETER, CONTACT AIRBUS
R FOR A REPAIR INSTRUCTION.

3 Oversize the four holes:
- holes with a diameter between 6.310-6.350 mm (0.241-02.50 in.) to between 6.706-6.747 mm (0.264-0.266 in.)
- holes with a diameter between 6.706-6.747 mm (0.264-0.266 in.) to between 7.102-7.141 mm (0.280-0.281 in.).

4 Install the bolts (2) with the sealant (Material No 09-001) and the nuts (1).
5 Torque the nuts (1) to between 0.75 and 0.90 m.daN (66.3 - 79.6 lbf.in.).
6 Remove the positioning tool.

**ON A/C ALL

Post SB 57-2086 For A/C ALL

D. Installation

(1)Make sure that you do the correct installation procedure for the fork fitting:
- Procedure for the same (re-used) fork fitting (3)
- procedure for a new (undrilled) fork fitting (3).

(a)Procedure for the same (re-used) fork fitting (3):

1 Install the fork fitting (3) on the structure as previously recorded.

2 Check the position and make sure that there is no gap between the fork fitting (3) and the structure.

3 Install the bolts (2) with the sealant (Material No 09-001) and the nuts (1).

4 Torque the nuts (1) to between 0.75 and 0.90 m.daN (66.3 - 79.6 lbf.in.).

(b)Procedure for a new (undrilled) fork fitting (3).

1 Use the positioning tool to install the fork fitting (3) on the structure:

NOTE: Follow the instructions that are given in the handbook of the tool container.

2 Check the position and make sure that there is no gap between the fork fitting (3) and the structure.

CAUTION: MAKE SURE THAT THE MINIMUM EDGE MARGIN OF THE STRUCTURE AND THE FORK FITTING IS 10.000 mm (0.400 in.). THEREFORE THE MAXIMUIM ALLOWABLE OVERSIZE DIAMETER IS 7.141 mm (0.281 in.). BEYOND THIS DIAMETER, CONTACT AIRBUS
R FOR A REPAIR INSTRUCTION.

3 Oversize the four holes to between 7.102-7.141 mm (0.280-0.281 in.).

4 Install the bolts (2) with the sealant (Material No 09-001) and the nuts (1).

5 Torque the nuts (1) to between 0.75 and 0.90 m.daN (66.3 - 79.6 lbf.in.).

6 Remove the positioning tool.

**ON A/C ALL

E. Close-Up

(1)Make sure that the work area is clean and clear of all tools and all other items of equipment.

(2)Install the RAT (Ref. 29-25-27, P. Block 401).

(3)Install the access panel 671DB.

(4)Remove the access platform.

SPHERICAL BEARING - PYLON TO WING AFT ATTACHMENT - REMOVAL/INSTALLATION

R WARNING : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND CHOCKS ARE IN
R POSITION.

R FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE
IN POSITION.
R

1. Reason for the Job

R A. To replace a worn bearing.

2. Equipment and Materials

ITEM	DESIGNATION
A. 98A57104003000	Extractor/Installer - Bearing
B. 98A57104004000	Torque Wrench Adapter - Bearing Nut
C. 98A57104004202	Spanner - Bearing Retaining) Sub. Assy. of
D. 98A57104004200	Drive) 98A57104004000
E. 98A57104004201	Nut)
F.	Torque Spanner suitable for 380 to 420 lb/ft (51.52 to 56.94 m.daN)
G. Material No. 09-024	Sealants (Ref. 20-31-00)
R H. Material No. 11-026	Cleaning Agents (Ref. 20-31-00)
J.	Lint Free Cloth
K.	Non-metallic Scraper
L.	Access Platform 4m (13.1 ft)
Referenced Procedure - 54-51-75, P. Block 401	Aft Fitting Attachment (Rib 18)

3. Procedure

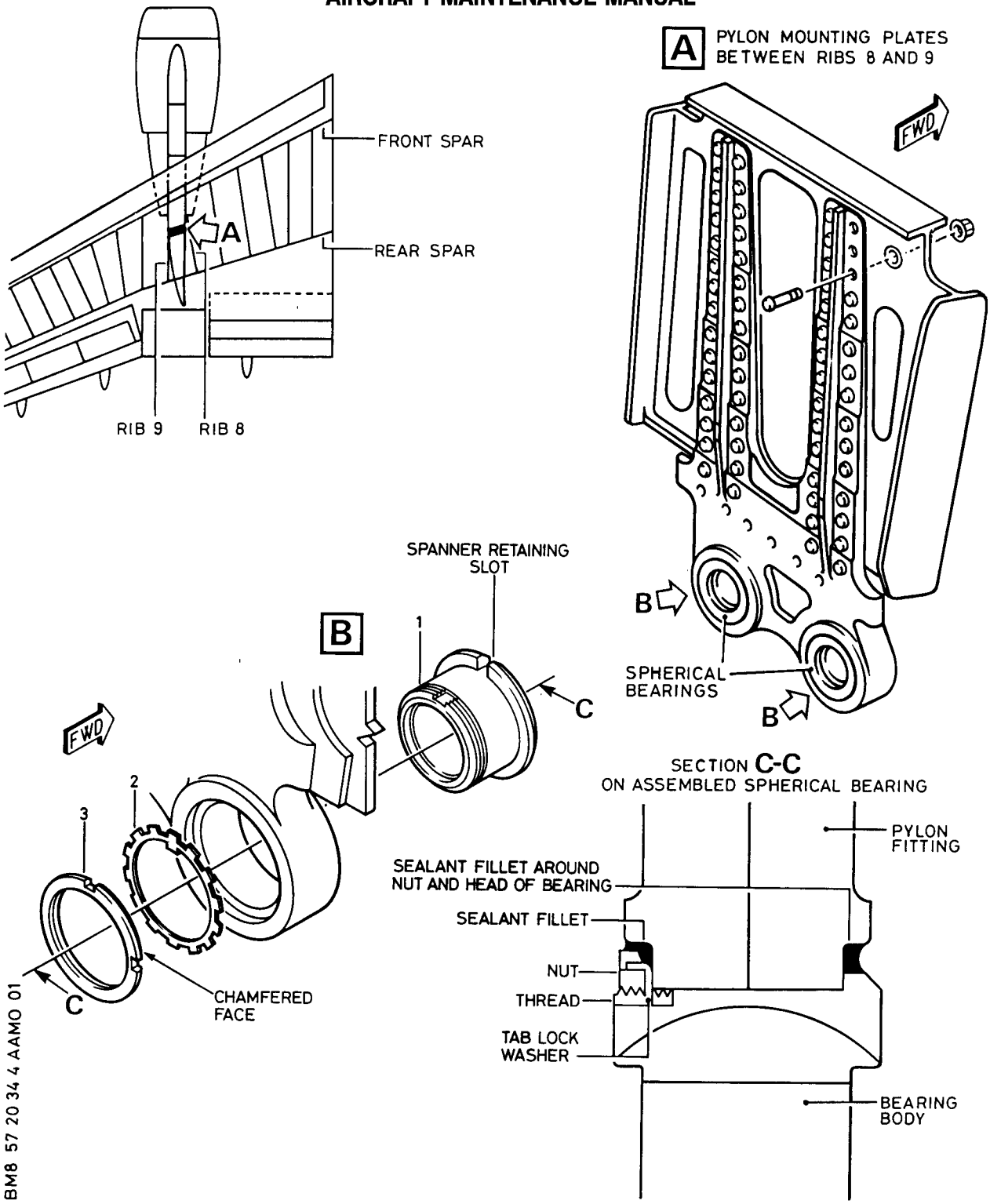
A. Job Set-Up
(1)Position the access platform.
(2)Remove the bushes and the shackles (Ref. 54-51-75, P. Block 401).

B. Removal

(Ref. Fig. 401)

CAUTION : MAKE CERTAIN THAT PYLON MOUNTING PLATES ARE NOT DAMAGED DURING THE FOLLOWING OPERATION.

NOTE : Some spherical bearings (1) do not have a spanner retaining slot, in which case the bearing retaining spanner PN98A57104004202 cannot be used and the spherical bearing (1) must be held by other means whilst releasing the retaining nut (3).



Spherical Bearing Installation
Figure 401

R

R (1)Use a non-metallic scraper and cleaning agent (Material No. 11-026) to
R remove the fillets of sealant from around the head of the spherical
R bearing (1) and the retaining nut (3) as required.
R (2)Disengage the tabs of the lock washer (2) from the slots in the
retaining nut (3).
(3)Use drive PN98A57104004200 to remove the retaining nut (3) and the lock washer (2). If the spherical bearing (1) has a retaining slot then use bearing retaining spanner PN98A57104004202 and nut PN98A57104004201 to remove the retaining nut (3) and the lock washer (2).
(4)Remove the spherical bearing (1) using extractor/installer (PN98A57104003000).

C. Installation

R NOTE : If available use a new spherical bearing (1), which has a slot
R for the bearing retaining spanner PN98A57104004202. This lets
R you torque tighten the retaining nut (3).

R (1)Use clean lint-free cloth moistened with cleaning agent (Material
R No. 11-026) to thoroughly clean the bore and the bearing faces of the:
R - pylon mounting plates
R - inner and outer surfaces of the new spherical bearing (1)
R - retaining nut (3)
R - lock washer (2).

R CAUTION : MAKE SURE THAT THE PYLON MOUNTING PLATES ARE NOT DAMAGED
R DURING THE OPERATIONS THAT FOLLOW.

(2)Give a small set to the locking tabs of the lock washer (2) before assembly to assist engagement of the tabs after torque loading the retaining nut (3).
(3)Apply sealant (Material No. 09-024) to:
(a)the bearing surfaces of the pylon mounting plates
(b)under the head and on the mating surfaces of the spherical bearing (1)
(c)the mating surfaces of the retaining nut (3) and lock washer (2).

R CAUTION : MAKE SURE THAT THE SPHERICAL BEARING (1) IS INSTALLED FROM
THE FRONT OF THE PYLON MOUNTING PLATE.

(4)Install the spherical bearing (1) to the pylon mounting plates using the extractor/installer (PN98A57104003000).
(5)Install the lock washer (2) with the set tabs pointing outwards, and the inner tab engaged in the spherical bearing (1) keyway.

R CAUTION : THE INITIAL AND FINAL TORQUE LOADING OPERATION MUST BE DONE
R WITHIN THE CURING TIME OF THE SEALANT.

(6)Install the retaining nut (3) onto the spherical bearing (1) with the chamfered face towards the lock washer (2).

(a)For spherical bearings (1) without a spanner retaining slot :
- Torque tighten the retaining nut (3) to between 380 and 420 lb ft (51.52 and 56.94 m. daN) and record the torque loading.
- Check the recorded figures at two hourly intervals, re-torque loading as required, until the torque loading figures are the same as the previous reading.
- Secure the retaining nut (3) with the tabs of the lock washer (2), increasing the torque if necessary to align the tabs of the lock washer (2) with the slots in the retaining nut (3).

(b)For spherical bearings (1) with a retaining slot :
- Using adaptor (PN98A57104004000) and bearing retaining spanner (PN98A57104004202) torque the retaining nut (3) to between 380 and 420 lb ft (51.52 and 56.94 m.daN) and record the torque loading.
- Check the recorded figures at two hourly intervals, re-torque loading as required, until the torque loading figures are the same as the previous reading.
- Secure the retaining nut (3) with the tabs of the lock washer (2), increasing the torque if necessary to align the tabs of the lockwasher (2) with the slots in the retaining nuts (3).

(c)Apply a fillet of sealant (Material No. 09-024) around the retaining nut (3) and the head of the spherical bearing (1).

D. Close-Up

(1)Install the bushes and the shackles (Ref. 54-51-75, P. Block 401).

(2)Remove the access platform.

R (3)Make sure that the work area is clean and clear of tools and all other
R items of equipment.

WARNING : BEFORE YOU BEGIN WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY COMPONENTS THAT MOVE, MAKE SURE THAT THE GROUND SAFETIES AND/OR WARNING NOTICES ARE IN THE CORRECT POSITION TO PREVENT ACCIDENTAL OPERATION OF THE CONTROLS.

1. Reasons for the Job

A. Main Gear Attachment Fittings - Visual Inspection (Ref. Para. 2.).

B. Main Gear Attachment Fittings - With removal, Fits and Clearances check (Ref. Para. 3.).

C. Flap Track Beam No. 2 thru 5 Attach Fittings - With removal, Fits and Clearances check (Ref. Para. 4).

D. Flap Track Fairing (Fixed) No. 2 thru 5 Attach Fittings - With removal, Fits and Clearances check (Ref. Para. 5.).

E. Pylon to Wing Attachment Fittings - With removal, Fits and Clearances check (Ref. Para. 6.).

2. Main-Gear Attachment Fittings - Visual Inspection.

A. Equipment and Materials

ITEM	DESIGNATION
A.	Safety Barriers
B.	Warning Notice - Prohibiting Operation of Landing Gear Control Lever
C.	Access Platform 3.10 m (10 ft. 2 in)
Referenced Procedures	
- 51-74-10, P. Block 801	Removal of Corrosion
- 51-75-10, P. Block 801	Paint Coatings
- 53-15-87, P. Block 601	Main Gear Attach Fitting

B. Procedure

(1)Job Set-Up

(a)On panel 4VU:

- make sure that the landing-gear control lever is in the **DOWN** position and display a warning notice prohibiting operation.

(b)Between First Officer's and Flight Engineer's seats

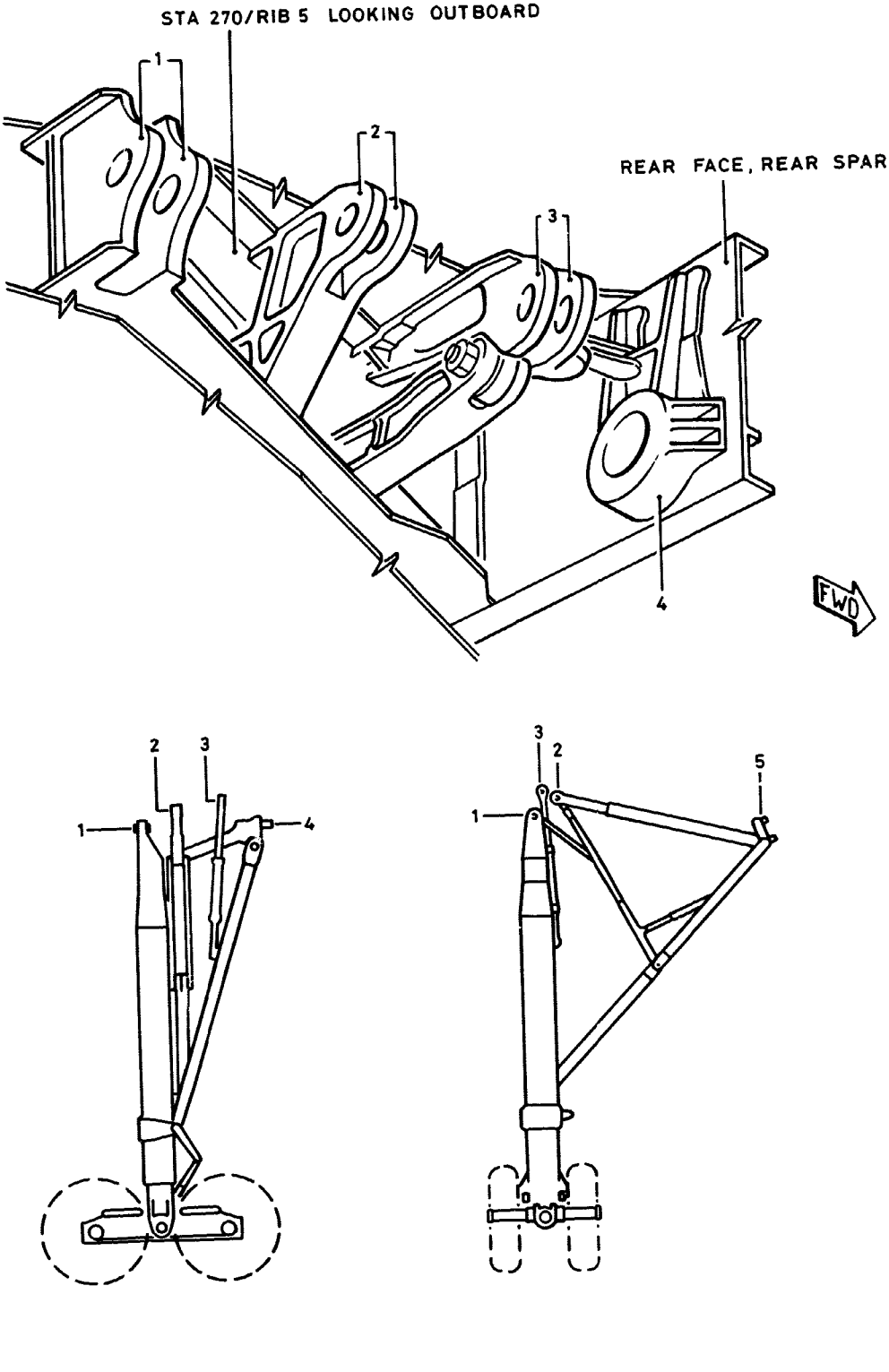
- make certain that landing gear free fall extension control handle is in Normal position.

(c)Position access platform.

(d)Position safety barriers prohibiting access to gear door travel range.

(2)Visual Inspection

(Ref. Fig. 601)



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Main Gear Attachment - Visual Inspection
Figure 601

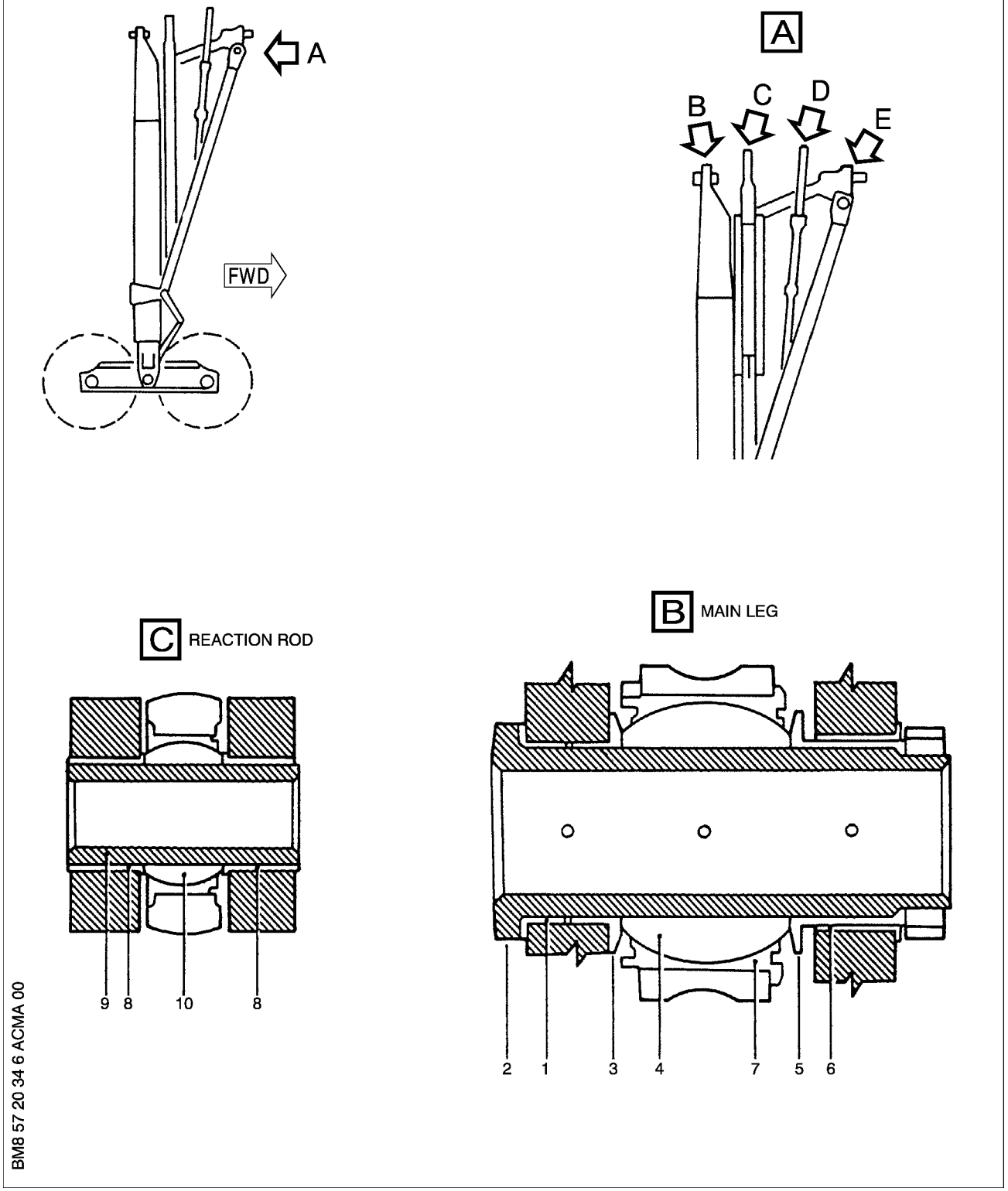
(a)Check the paint coating for cracks, corrosion or damage at these locations:
- rib 5 (STA270) assembly
- main gear aft pickup lugs (1)
- reaction rod attach fittings (2)
- actuating cylinder attach fittings (3)
- main gear forward pickup attach fitting (4)
- brace strut fitting (5) (Ref. 53-15-87, P. Block 601).

NOTE : (1) If crack formation is suspected, use an approved non-destructive testing method for verification.
(2) If necessary, for removal of corrosion refer to 51-74-10, P. Block 801, with strict observation of permissible limitations contained in the Structure Repair Manual (SRM).
(3) If necessary, refer to 51-75-10, P. Block 801 for repairs to paint coatings.

(3)Close-Up
(a)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.
(b)Remove the safety barrier.
(c)Remove the access platform.

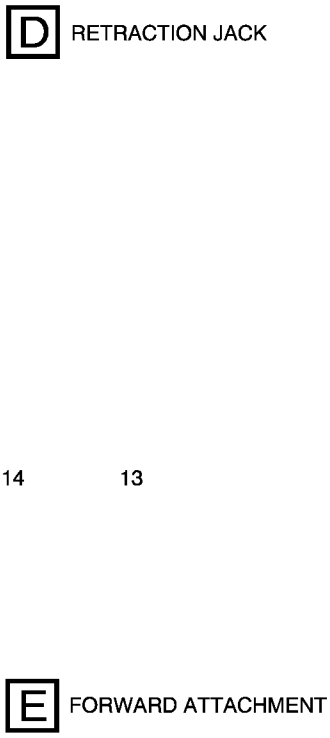
3. Main-Gear Attachment Fittings
With removal - Table of Fits and Clearances
R (Ref. Fig. 602) (Sheet 1/2)
R (Ref. Fig. 602) (Sheet 2/2)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
A ID1	4.5275 (114.998)	4.5289 (115.034)				4.5295 (115.050)	
			0.0005 (0.013)	0.0027 (0.069)			0.0045 (0.114)
OD2	4.5262 (114.965)	4.5270 (114.986)			4.5250 (114.935) *		
ID3	4.5275 (114.998)	4.5289 (115.034)				4.5295 (115.050)	
			0.0005 (0.013)	0.0027 (0.069)			0.0045 (0.114)
OD2	4.5262 (114.965)	4.5270 (114.986)			4.5250 (114.935) *		
ID4	4.5276 (115.000)	4.5289 (115.035)				4.5317 (115.106)	
			0.0006 (0.014)	0.0027 (0.070)			0.0067 (0.171)
OD2	4.5262 (114.965)	4.5270 (114.986)			4.5250 (114.935) *		
ID5	4.5275 (114.998)	4.5289 (115.035)				4.5295 (115.050)	
			0.0005 (0.013)	0.0027 (0.069)			0.0045 (0.114)
OD2	4.5262 (114.965)	4.5270 (114.986)			4.5250 (114.935) *		



Main Gear Attachment - Details
(Sheet 1/2)
Figure 602

R



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Main Gear Attachment - Details
(Sheet 2/2)
Figure 602

R

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
ID6	4.9336 (125.313)	4.9352 (125.354)				4.9365 (125.387)	
			0.0016 (0.041)	0.0042 (0.107)			0.0065 (0.165)
OD5	4.9310 (125.247)	4.9320 (125.273)			4.9300 (125.222) *		
ID7	6.8110 (173.000)	6.8120 (173.025)				6.8130 (173.051)	
			0.0005 (0.013)	0.0025 (0.064)			0.0045 (0.114)
OD4	6.8095 (172.961)	6.8105 (172.986)			6.8085 (172.936)		
B ID8	2.7559 (70.000)	2.7571 (70.030)				2.7580 (70.053)	
			0.0004 (0.010)	0.0023 (0.058)			0.0040 (0.102)
OD9	2.7548 (69.972)	2.7555 (69.990)			2.7540 (69.952) *		
ID10	2.7559 (70.000)	2.7571 (70.030)				2.7580 (70.053)	
			0.0004 (0.010)	0.0023 (0.058)			0.0040 (0.102)
OD9	2.7548 (69.972)	2.7555 (69.990)			2.7540 (69.952) *		

With removal - Table of Fits and Clearances
R (Ref. Fig. 602) (Sheet 1/2)
R (Ref. Fig. 602) (Sheet 2/2)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

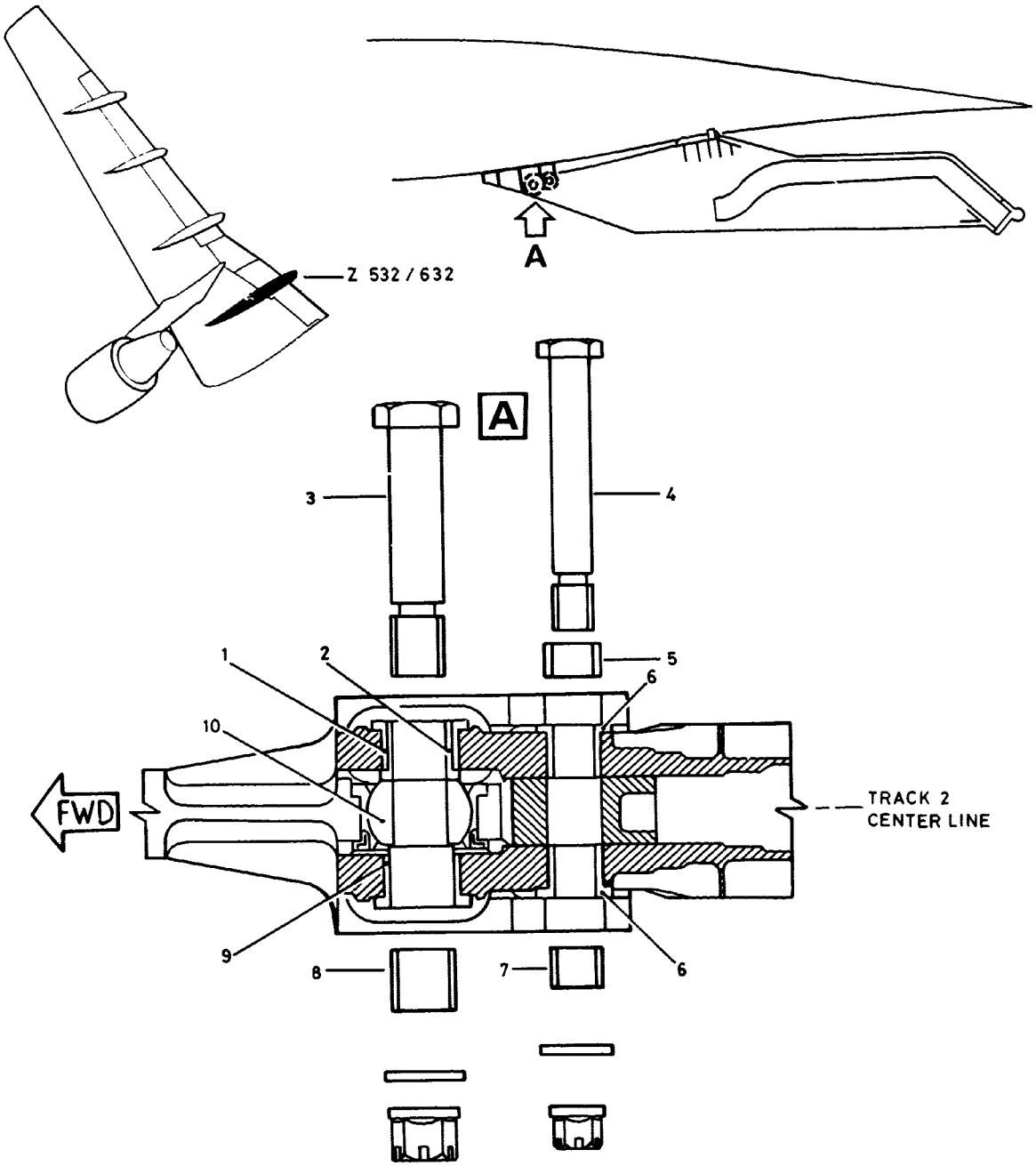
Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
C ID11	2.7559 (70.000)	2.7571 (70.030)				2.7580 (70.053)	
			0.0004 (0.010)	0.023 (0.058)			0.0040 (0.102)
OD12	2.7548 (69.972)	2.7555 (69.990)			2.7540 (69.952) *		
ID14	2.7559 (70.000)	2.7571 (70.030)				2.7580 (70.053)	
			0.0004 (0.010)	0.0023 (0.058)			0.0040 (0.102)
OD12	2.7548 (69.972)	2.7555 (69.990)			2.7540 (69.952) *		
ID13	2.7559 (70.000)	2.7571 (70.030)				2.7580 (70.053)	
			0.0004 (0.010)	0.0023 (0.058			0.0040 (0.102)
OD12	2.7548 (69.972)	2.7555 (69.990)			2.7540 (69.952) *		
D ID15	4.6063 (117.000)	4.6077 (117.035)				4.6090 (117.068)	
			0.0005 (0.013)	0.0033 (0.083)			0.0055 (0.140)
OD16	4.6044 (116.952)	4.6058 (116.987)			4.6035 (116.929) *		
ID17	5.9213 (150.401)	5.9229 (150.442)				5.9240 (140.470)	
			0.0006 (0.015)	0.0029 (0.074)			0.0055 (0.140)
OD15	5.9200	5.9207			5.9185		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
	(150.368)	(150.386)			(150.330) *		

NOTE: The bearing in the forward attachment fitting of the MLG is held in position by a bolt device. The bearing cannot migrate inside rib 5. Therefore, there are no fits and clearances or in service wear limits given for this dimension.

4. Flap Track Beam No.2 thru 5 Attach Fittings
With removal - Table of Fits and Clearances
(Ref. Fig. 603)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A	1.6929 (43.000)	1.6939 (43.025)				1.6950 (43.053)	
ID1			0.0004 (0.010)	0.0018 (0.046)			0.0035 (0.089)
OD2	1.6921 (42.979)	1.6925 (42.990)			1.6915 (42.964)		
ID2	1.4995 (38.087)	1.5000 (38.100)				1.5005 (38.113)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.4990 (38.074)	1.4995 (38.087)			1.4985 (38.062)		
OD4	1.2492 (31.730)	1.2496 (31.740)			1.2485 (31.711)		
			0.0004 (0.010)	0.0018 (0.045)			0.0035 (0.089)
ID5	1.2500 (31.750)	1.2510 (31.775)				1.2520 (31.800)	
OD4	1.2492 (31.730)	1.2496 (31.740)			1.2485 (31.711)		
			0.0004 (0.010)	0.0018 (0.045)			0.0035 (0.089)
ID6	1.250 (31.750)	1.2510 (31.775)				1.2520 (31.800)	
ID7	1.2500 (31.750)	1.2510 (31.775)				1.2520 (31.800)	
			0.0004 (0.010)	0.0018 (0.045)			0.0035 (0.089)
OD4	1.2492 (31.730)	1.2496 (31.740)			1.2485 (31.711)		

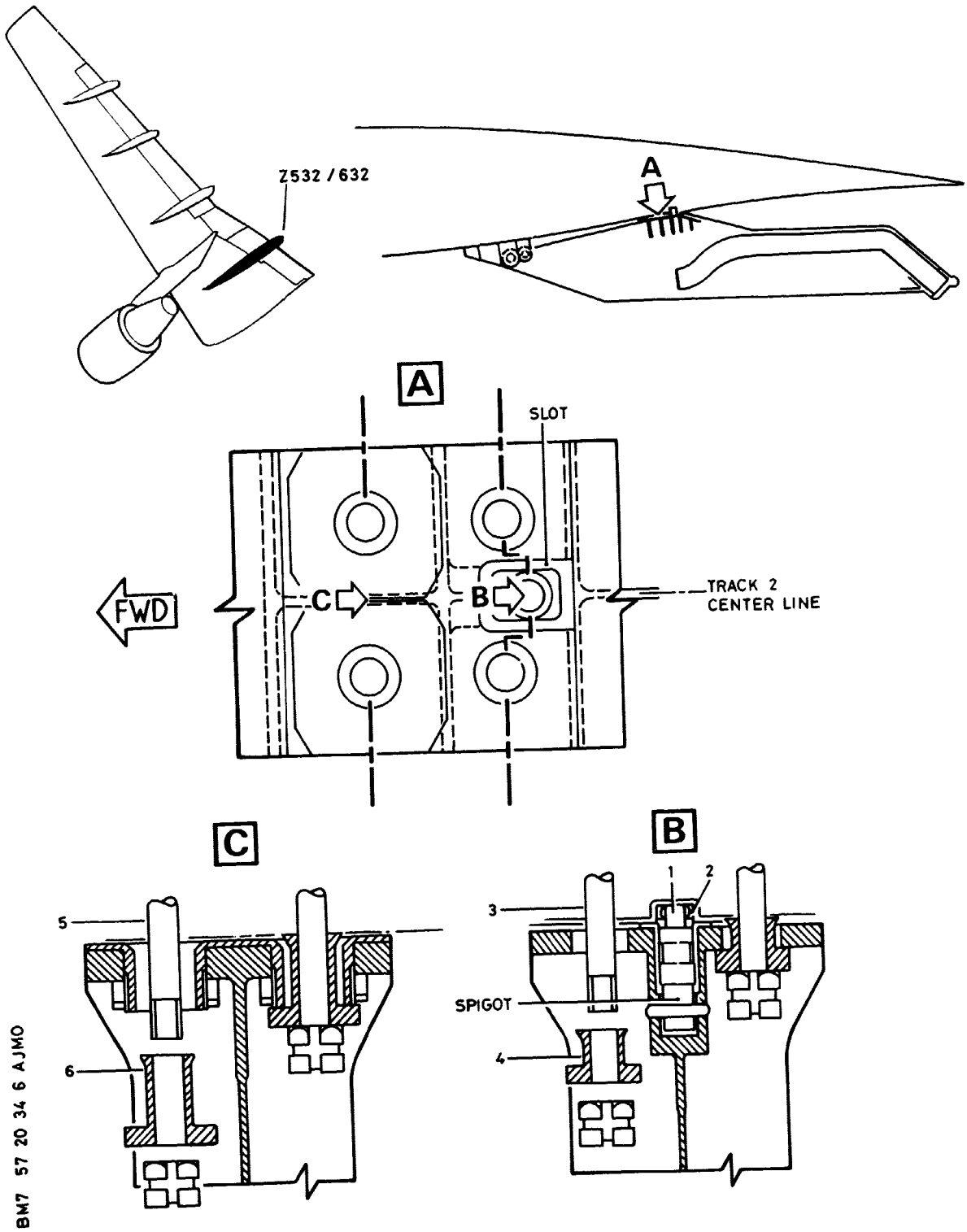


Flap Track Beam No. 2 - Forward Attachment
Figure 603

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
ID8	1.4995 (38.087)	1.5000 (38.100)				1.5005 (38.113)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.4990 (38.074)	1.4995 (38.087)			1.4985 (38.062)		
ID9	1.6929 (43.000)	1.6939 (43.025)				1.6950 (43.053)	
			0.0004 (0.010)	0.0018 (0.046)			0.0035 (0.089)
OD8	1.6921 (42.979)	1.6925 (42.990)			1.6915 (42.964)		
ID10	1.4995 (38.087)	1.5000 (38.100)				1.5005 (38.113)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.4990 (38.074)	1.4995 (38.087)			1.4985 (38.062)		

With removal - Table of Fits and Clearances
(Ref. Fig. 604)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. Max.	Original Mfg Limits: Assy. Clearance (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
B OD1	1.0205 (25.920)	1.0224 (25.970)							
			0.0012 (0.030)	0.0090 (0.229)	Engineer's discretion				
ID2	1.0236 (26.000)	1.0295 (26.150)							
OD3	0.6860 (17.424)	0.6870 (17.450)					0.6845 (17.386)		
			0.0004 (0.010)	0.0021 (0.053)					0.0045 (0.114)
ID4	0.6874 (17.460)	0.6881 (17.478)						0.6890 (17.500)	
C OD5	0.6860 (17.424)	0.6870 (17.450)					0.6845 (17.386)		
			0.0004 (0.010)	0.0021 (0.053)					0.0045 (0.114)
ID6	0.6874 (17.460)	0.6881 (17.478)						0.6890 (17.500)	



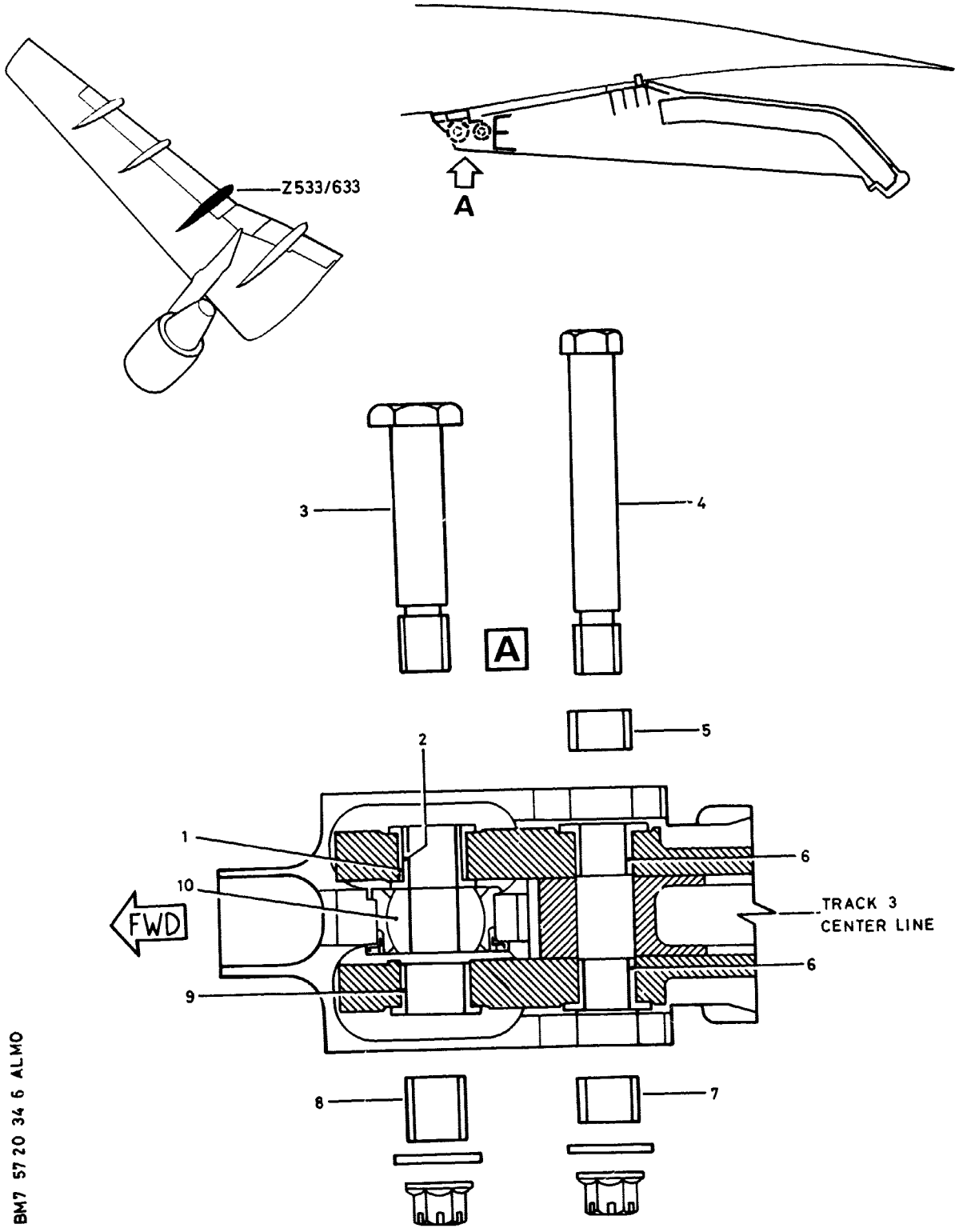
Flap Track Beam No. 2 - Aft Attachment
Figure 604

With removal - Table of Fits and Clearances
(Ref. Fig. 605)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A	1.2598 (32.000)	1.2608 (32.024)				1.2620 (32.055)	
ID1			0.0004 (0.010)	0.0018 (0.046)			0.0035 (0.089)
OD2	1.2590 (31.979)	1.2594 (31.990)			1.2585 (31.966)		
ID2	1.0620 (26.975)	1.0625 (26.988)				1.0630 (27.000)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.0615 (26.962)	1.0620 (26.975)			1.0610 (26.950)		
OD4	0.9993 (25.382)	0.9997 (25.392)			0.9985 (25.362)		
			0.0003 (0.008)	0.0015 (0.038)			0.0035 (0.089)
ID5	1.0000 (25.400)	1.0008 (25.420)				1.0020 (25.910)	
OD4	0.9993 (25.382)	0.9997 (25.392)			0.9985 (25.362)		
			0.0003 (0.008)	0.0015 (0.038)			0.0035 (0.089)
ID6	1.0000 (25.400)	1.0008 (25.420)				1.0020 (25.910)	
ID7	1.0000 (25.400)	1.0008 (25.420)				1.0020 (25.910)	
			0.0003 (0.008)	0.0015 (0.038)			0.0035 (0.089)
OD4	0.9993 (25.382)	0.9997 (25.392)			0.9985 (25.362)		
ID8	1.0620 (26.975)	1.0625 (26.988)				1.0630 (27.000)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.0615	1.0620			1.0610		

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
	(26.962)	(26.975)			(26.950)		

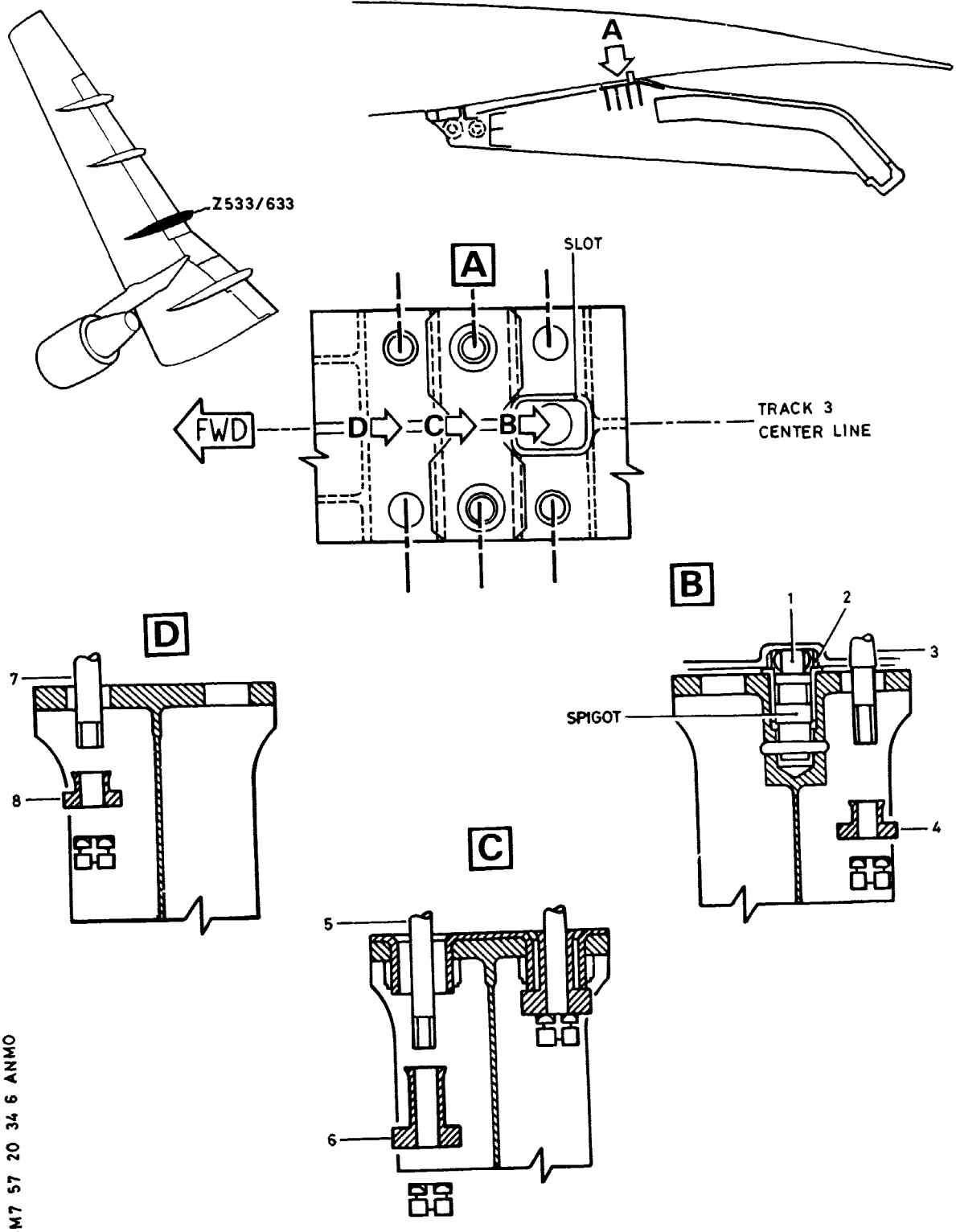


Flap Track Beam No. 3 - Forward Attachment
Figure 605

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
ID9	1.2598 (32.000)	1.2608 (32.024)				1.2620 (32.055)	
			0.0004 (0.010)	0.0018 (0.046)			0.0035 (0.089)
OD8	1.2590 (31.979)	1.2594 (31.990)			1.2585 (31.966)		
ID10	1.0620 26.975)	1.0625 (26.988)				1.0630 (27.000)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.0615 (26.962)	1.0620 (26.975)			1.0610 (26.950)		

With removal - Table of Fits and Clearances
(Ref. Fig. 606)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

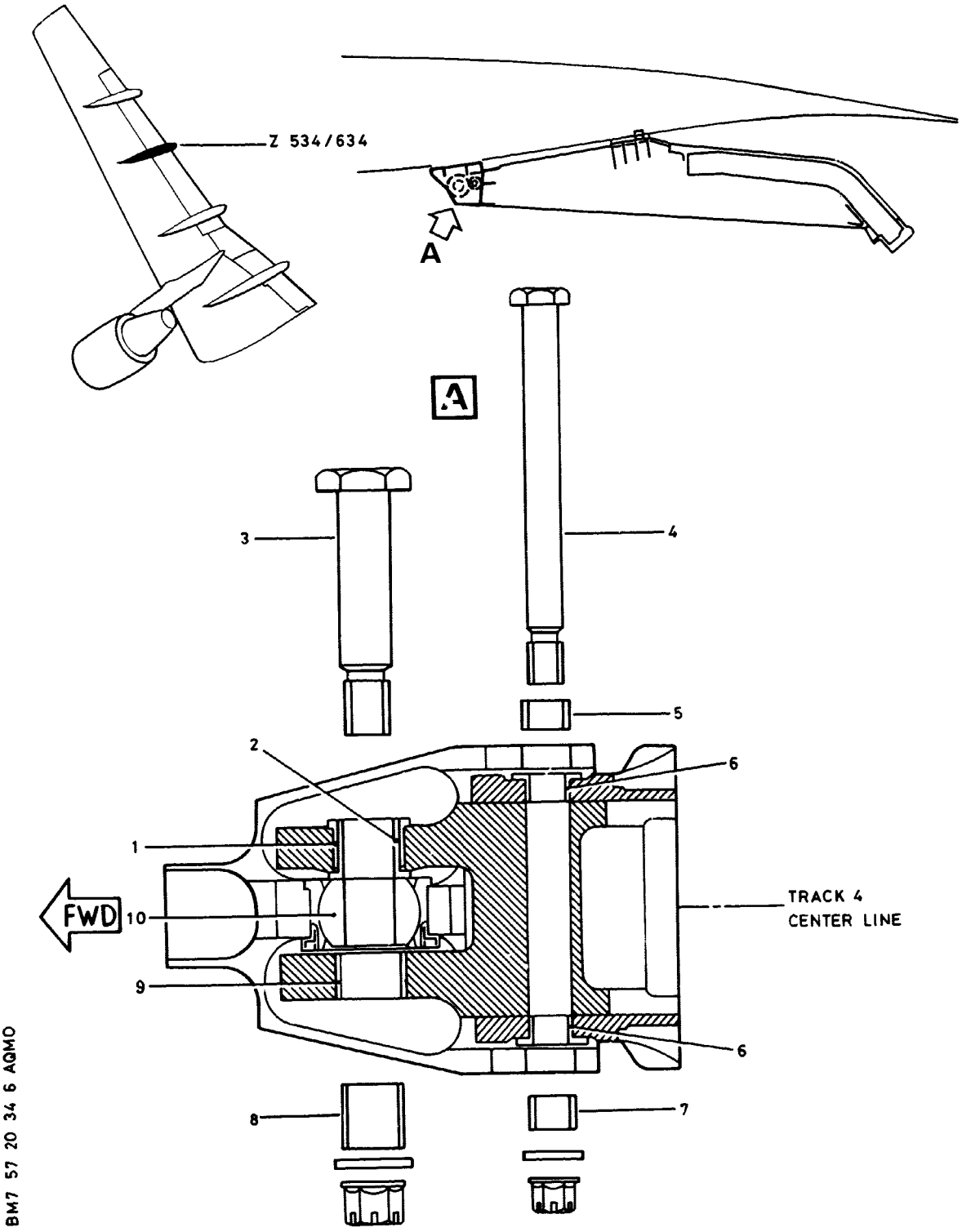
Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
B OD1	1.0205 (25.920)	1.0224 (25.970)					
			0.0012 (0.030)	0.0090 (0.229)	Engineer's Discretion		
ID2	1.0236 (26.000)	1.0295 (26.150)					
OD3	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID4	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	
C OD5	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID6	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	
D OD7	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID8	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	



Flap Track Beam No. 3 - Aft Attachment
Figure 606

With removal - Table of Fits and Clearances
(Ref. Fig. 607)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A	1.2598	1.2608				1.2620	
ID1	(32.000)	(32.024)				(32.055)	
			0.0004	0.0018			0.0035
			(0.010)	(0.046)			(0.089)
OD2	1.2590	1.2594			1.2585		
	(31.979)	(31.989)			(31.966)		
ID2	1.0620	1.0625				1.0630	
	(26.975)	(26.988)				(27.000)	
			0.0000	0.0010			0.0020
			(0.000)	(0.026)			(0.051)
OD3	1.0615	1.0620			1.0610		
	(26.962)	(26.974)			(26.950)		
OD4	0.7493	0.7497			0.7485		
	(19.032)	(19.042)			(19.020)		
			0.0003	0.0015			0.0035
			(0.008)	(0.038)			(0.084)
ID5	0.7500	0.7508				0.7520	
	(19.050)	(19.070)				(19.101)	
ID6	0.7500	0.7508				0.7520	
	(19.050)	(19.070)				(19.101)	
			0.0003	0.0015			0.0035
			(0.008)	(0.038)			(0.084)
OD4	0.7493	0.7497			0.7485		
	(19.032)	(19.042)			(19.020)		
ID7	0.7500	0.7508				0.7520	
	(19.050)	(19.070)				(19.101)	
			0.0003	0.0015			0.0035
			(0.008)	(0.038)			(0.084)
OD4	0.7493	0.7497			0.7485		
	(19.032)	(19.042)			(19.020)		

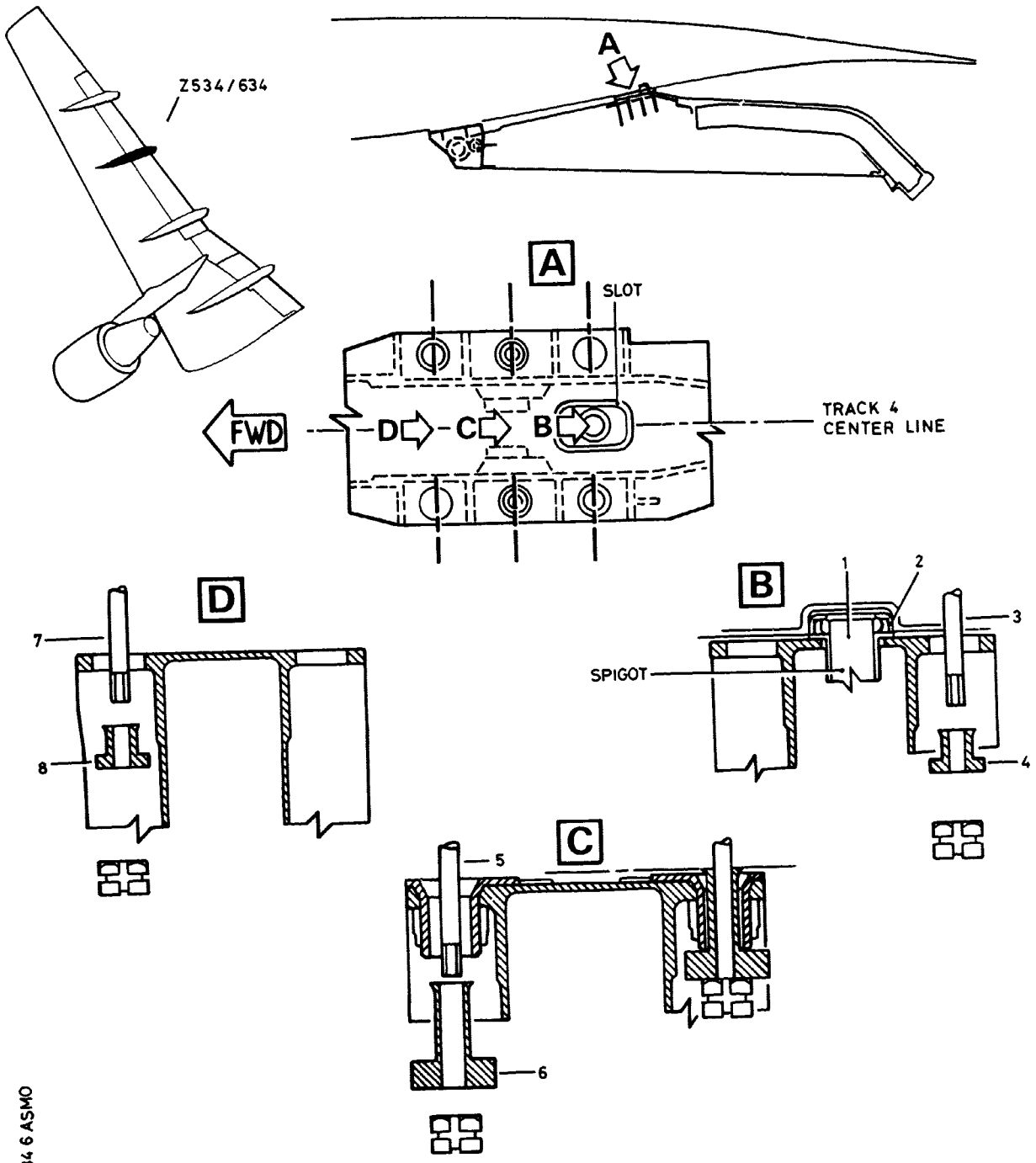


Flap Track Beam No. 4 - Forward Attachment
Figure 607

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
ID8	1.0620 (26.975)	1.0625 (26.988)				1.0630 (27.000)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.0615 (26.962)	1.0620 (26.975)			1.0610 (26.950)		
ID9	1.2598 (32.000)	1.2608 (32.024)				1.2620 (32.055)	
			0.0004 (0.010)	0.0018 (0.046)			0.0035 (0.084)
OD8	1.2590 (31.979)	1.2594 (31.989)			1.2585 (31.966)		
ID10	1.0620 (26.975)	1.0625 (26.988)				1.0630 (27.000)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.0615 (26.962)	1.0620 (26.975)			1.0610 (26.950)		

With removal - Table of Fits and Clearances
(Ref. Fig. 608)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance Inch. Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits Inch. Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
B OD1	1.6504 (41.920)	1.6524 (41.970)					
			0.0011 (0.028)	0.0090 (0.229)	Engineer's Discretion		
ID2	1.6535 (42.000)	1.6594 (42.150)					
OD3	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID4	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	
C OD5	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID6	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	
D OD7	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID8	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	

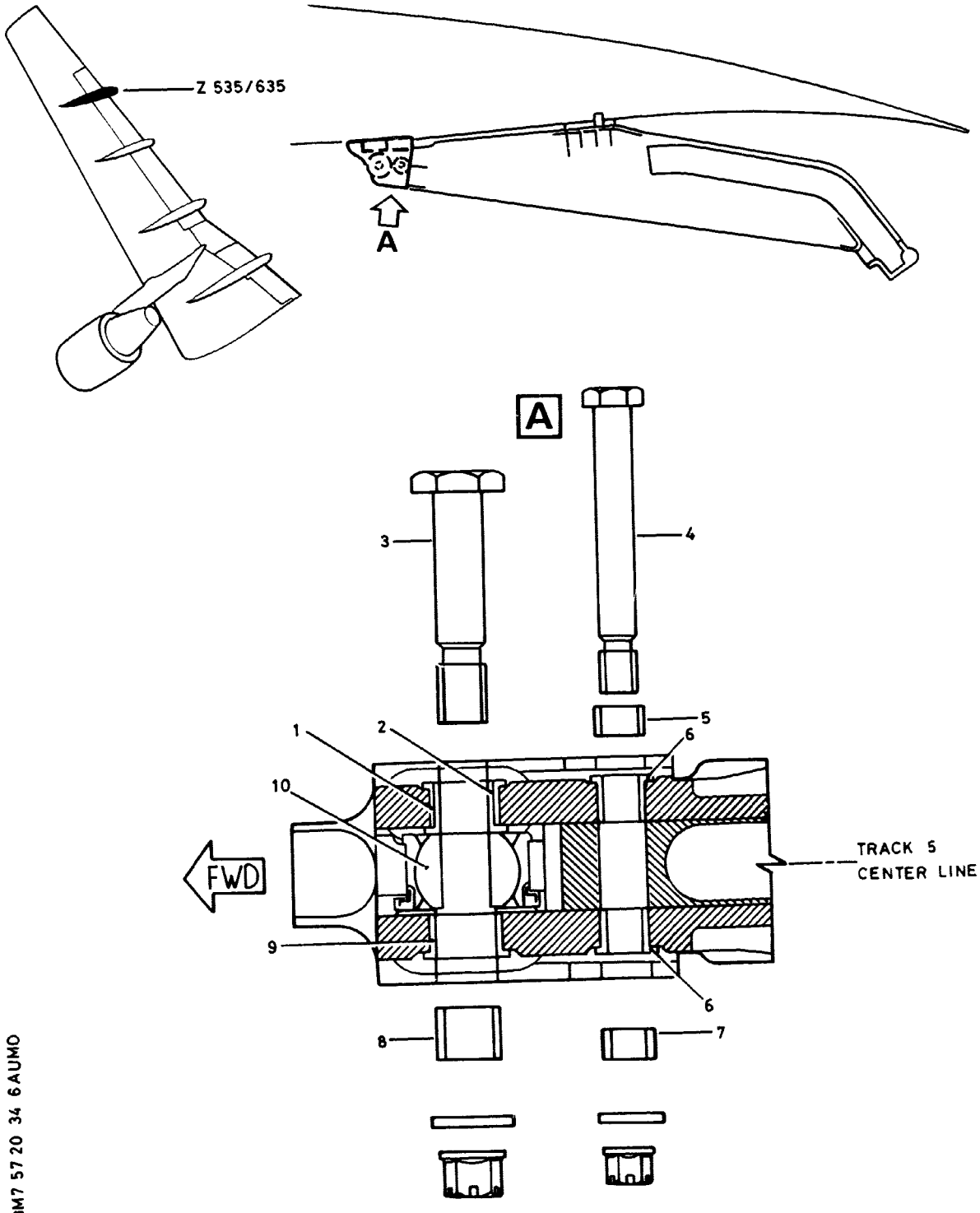


Flap Track Beam No. 4 - Aft Attachment
Figure 608

With removal - Table of Fits and Clearances
(Ref. Fig. 609)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
A	1.2598	1.2608				1.2620	
ID1	(32.000)	(32.024)				(32.055)	
			0.0004	0.0018			0.0035
			(0.010)	(0.046)			(0.089)
OD2	1.2590	1.2594			1.2585		
	(31.979)	(31.989)			(31.966)		
ID2	1.0620	1.0625				1.0630	
	(26.975)	(26.988)				(27.000)	
			0.0000	0.0010			0.0020
			(0.000)	(0.026)			(0.051)
OD3	1.0615	1.0620			1.0610		
	(26.962)	(26.975)			(26.950)		
OD4	0.7493	0.7497			0.7485		
	(19.032)	(19.042)			(19.020)		
			0.0003	0.0015			0.0035
			(0.008)	(0.038)			(0.089)
ID5	0.7500	0.7508				0.7520	
	(19.050)	(19.070)				(19.101)	
ID6	0.7500	0.7508				0.7520	
	(19.050)	(19.070)				(19.101)	
			0.0003	0.0015			0.0035
			(0.008)	(0.038)			(0.089)
OD4	0.7493	0.7497			0.7485		
	(19.032)	(19.042)			(19.020)		
ID7	0.7500	0.7508				0.7520	
	(19.050)	(19.070)				(19.101)	
			0.0003	0.0015			0.0035
			(0.008)	(0.038)			(0.089)
OD4	0.7493	0.7497			0.7485		
	(19.032)	(19.042)			(19.020)		

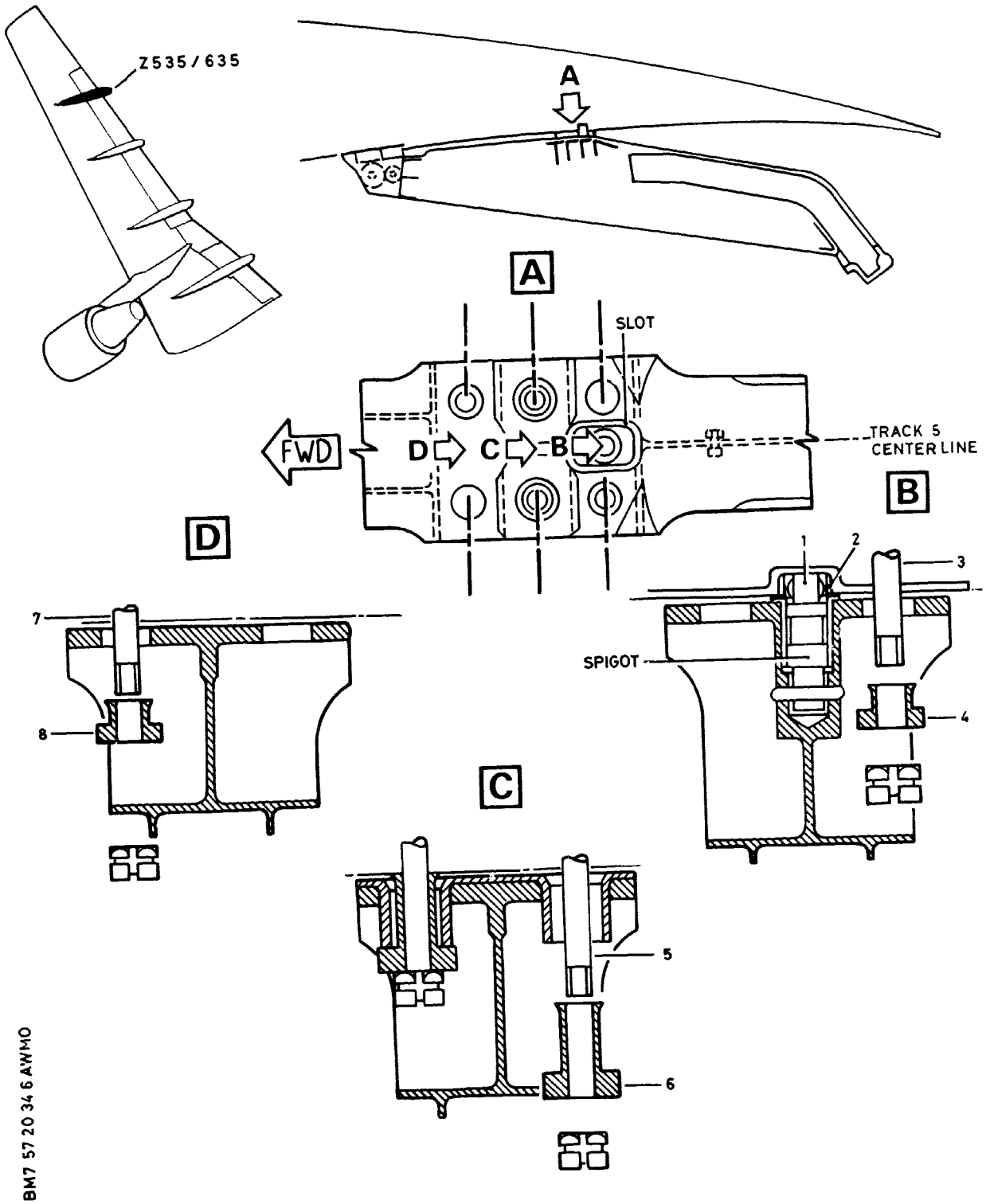


Flap Track Beam No. 5 - Forward Attachment
Figure 609

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
ID8	1.0620 (26.975)	1.0625 (26.988)				1.2620 (32.055)	
			0.0000 (0.000)	0.0010 (0.026)			0.0035 (0.089)
OD3	1.0615 (26.962)	1.0620 (26.975)			1.2585 (31.966)		
ID9	1.2598 (32.000)	1.2608 (32.024)				1.2620 (32.055)	
			0.0004 (0.010)	0.0018 (0.046)			0.0035 (0.089)
OD8	1.2590 (31.979)	1.2594 (31.989)			1.2585 (31.966)		
ID10	1.0620 (26.975)	1.0625 (26.988)				1.0630 (27.000)	
			0.0000 (0.000)	0.0010 (0.026)			0.0020 (0.051)
OD3	1.0615 (26.962)	1.0620 (26.975)			1.0610 (26.950)		

With removal - Table of Fits and Clearances
(Ref. Fig. 610)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

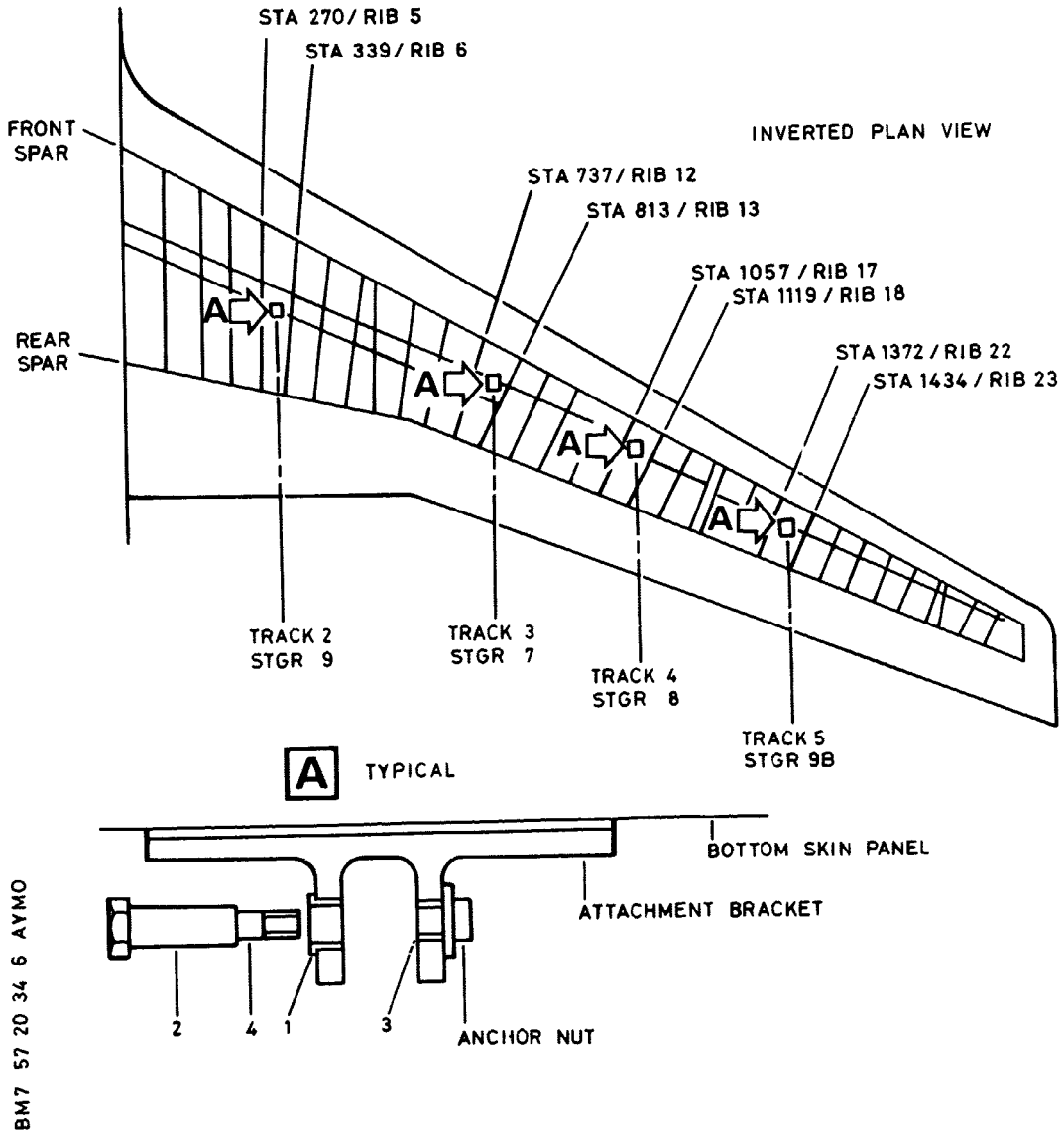
Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance Inch. Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits Inch. Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
B OD1	1.0205 (25.920)	1.0224 (25.970)					
			0.0012 (0.030)	0.0090 (0.229)	Engineer's Discretion		
ID2	1.0236 (26.000)	1.0295 (26.150)					
OD3	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID4	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	
C OD5	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID6	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	
D OD7	0.4985 (12.662)	0.4995 (12.687)			0.4970 (12.624)		
			0.0005 (0.013)	0.0022 (0.056)			0.0055 (0.140)
ID8	0.5000 (12.700)	0.5007 (12.718)				0.5025 (12.764)	



Flap Track Beam No. 5 - Aft Attachment
Figure 610

5. Flap Track Fairing (Fixed) No. 2 thru 5 Attach Fitting
With removal - Table of Fits and Clearances.
(Ref. Fig. 611)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A ID1	0.3750 (9.525)	0.3759 (9.548)				0.3770 (9.575)	
			0.0005 (0.013)	0.0020 (0.051)			0.0040 (0.102)
OD2	0.3739 (9.497)	0.3745 (9.512)			0.3730 (9.474)		
ID3	0.3125 (7.938)	0.3134 (7.960)				0.3145 (7.988)	
			0.0005 (0.013)	0.0019 (0.048)			0.0040 (0.102)
OD4	0.3115 (7.912)	0.3120 (7.925)			0.3105 (7.887)		
ID	-	-					
B ID4	1.9685 (50.000)	1.9695 (50.025)					
					No wear permitted		
OD	-	-					



Flap Track Fairing No. 2, 3, 4 and 5 -
Forward Attachment
Figure 611

6. Pylon to Wing Attach Fittings
With removal - Table of Fits and Clearances
(Ref. Fig. 612)

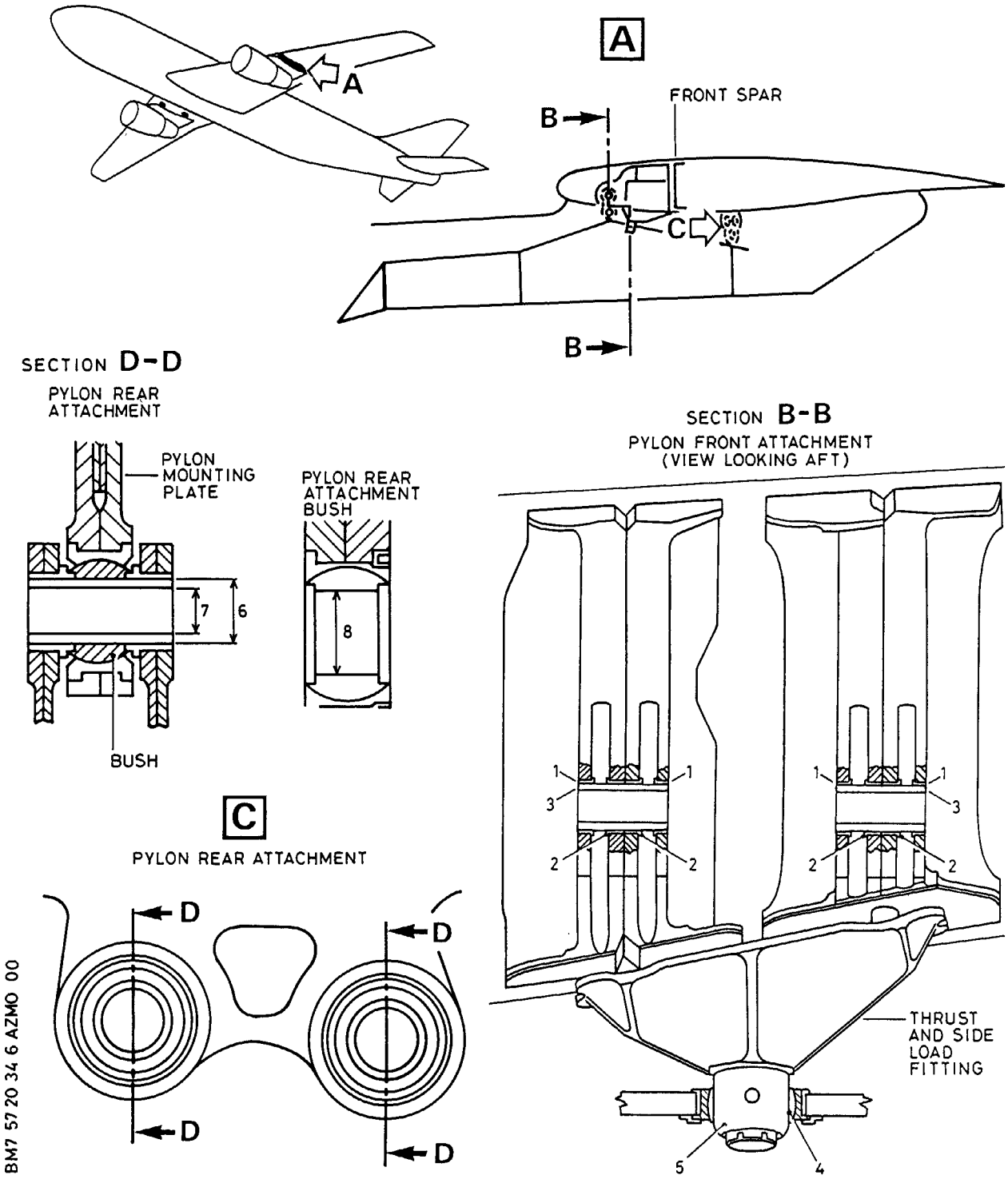
A. Equipment and Materials

ITEM	DESIGNATION
Referenced Procedures - 57-20-34, P. Block 201	SRM - Attach Fittings

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A							
ID1	2.2047 (55.998)	2.2059 (56.028)				2.2074 (56.067)	
			0.0004 (0.010)	0.0023 (0.058)			0.0047 (0.120)
OD3	2.2036 (55.970)	2.2043 (55.988)			2.2027 (55.947)		
ID2	2.2047 (55.998)	2.2059 (56.028)				2.2074 (56.067)	
			0.0004 (0.010)	0.0023 (0.058)			0.0047 (0.120)
OD3	2.2036 (55.970)	2.2043 (55.988)			2.2027 (55.947)		
ID4	3.4646 (87.999)	3.4659 (88.032)				3.4677 (88.078)	
			0.0005 (0.013)	0.0027 (0.069)			0.0055 (0.140)
OD5	3.4632 (87.963)	3.4641 (87.986)			3.4622 (87.938)		
B							
ID6	1.9685 (49.999)	1.9695 (50.029)				1.9712 (50.068)	

NOTE : If the bushes in the pylon front attachment, Items 1 and 2, are outside the limits, refer to SRM 57-20-34, P. Block 201 for replacement.

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
			0.0004 (0.010)	0.0023 (0.058)			0.0047 (0.120)
OD7	1.9674 (49.971)	1.9681 (49.989)			1.9665 (49.948)		
C ID8	1.9684 (50.000)	1.9694 (50.025)					NO WEAR PERMITTED



Pylon To Wing Attachment Fittings
Figure 612

R WARNING : BEFORE YOU START MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT
R CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS,
R ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE SURE THAT THE
R GROUND SAFETIES AND/OR WARNING NOTICES ARE IN THE CORRECT
R POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

R 1. Reason(s) for the Job
R A. Flap-Track Fixed Fairings - Removal/Installation
R B. Wing Jacking-Point Fairing 575EB(675EB) - Removal/Installation.

R 2. FLAP-TRACK FIXED FAIRINGS

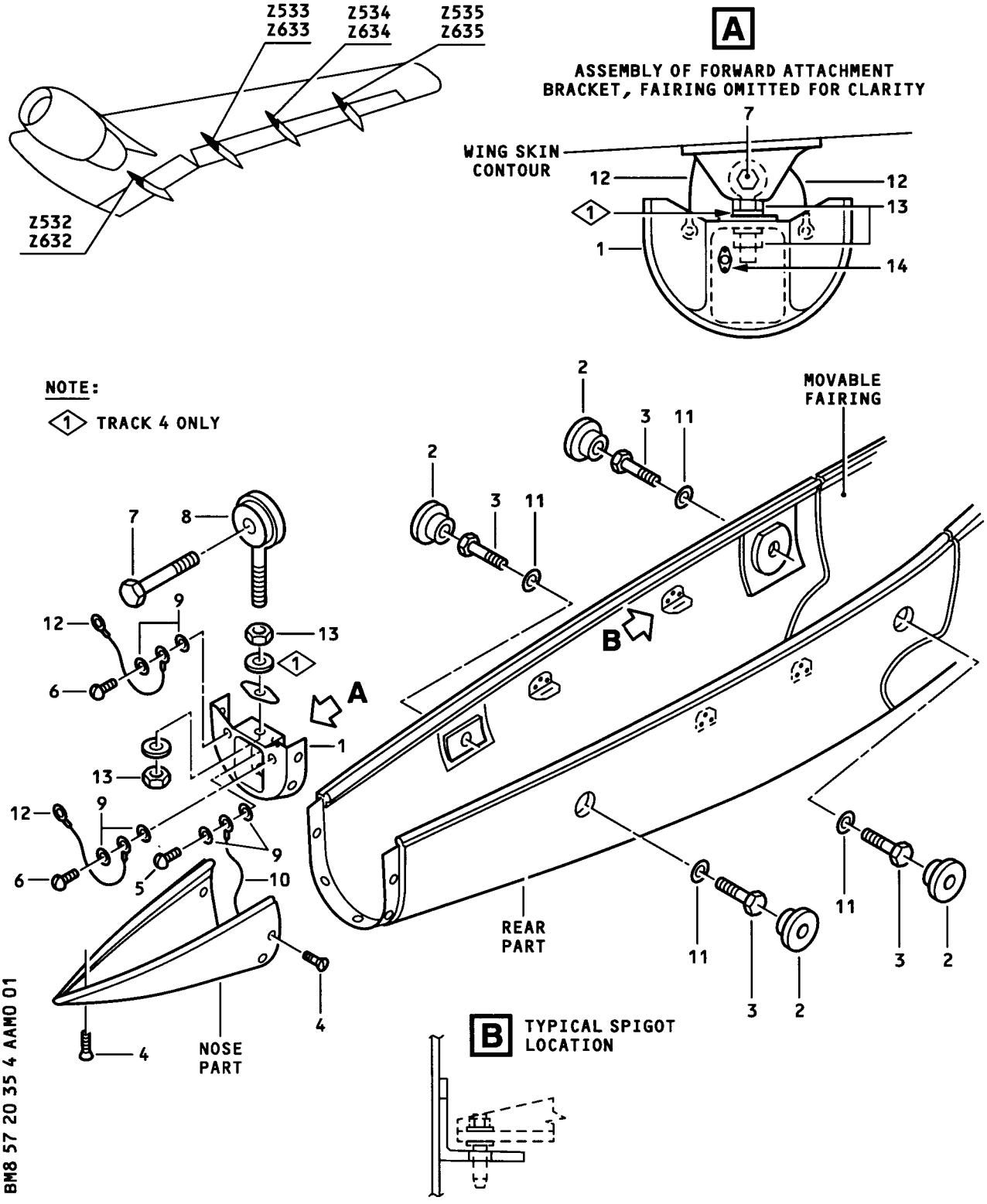
A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 4.2 m (14 ft)
R B.	Lockwire, Corrosion Resistant Steel, Dia. 0.8mm (0.032 in.)
R C.	Torque Wrench 0.8 to 2.0 m.daN (70 to 180 lbf.in.)
R D. Material No. 04-004	Common Grease (Ref. 20-31-00)
R E. Material No. 05-027	Special Materials (Ref. 20-31-00)
Referenced Procedures - 20-28-11, P. Block 1	Electrical Bonding

R B. Procedure
R (Ref. Fig. 401)
R (Ref. Fig. 402)
R (1)Job Set-Up
R (a)Put the access platform in position below the related flap track
R fairing.

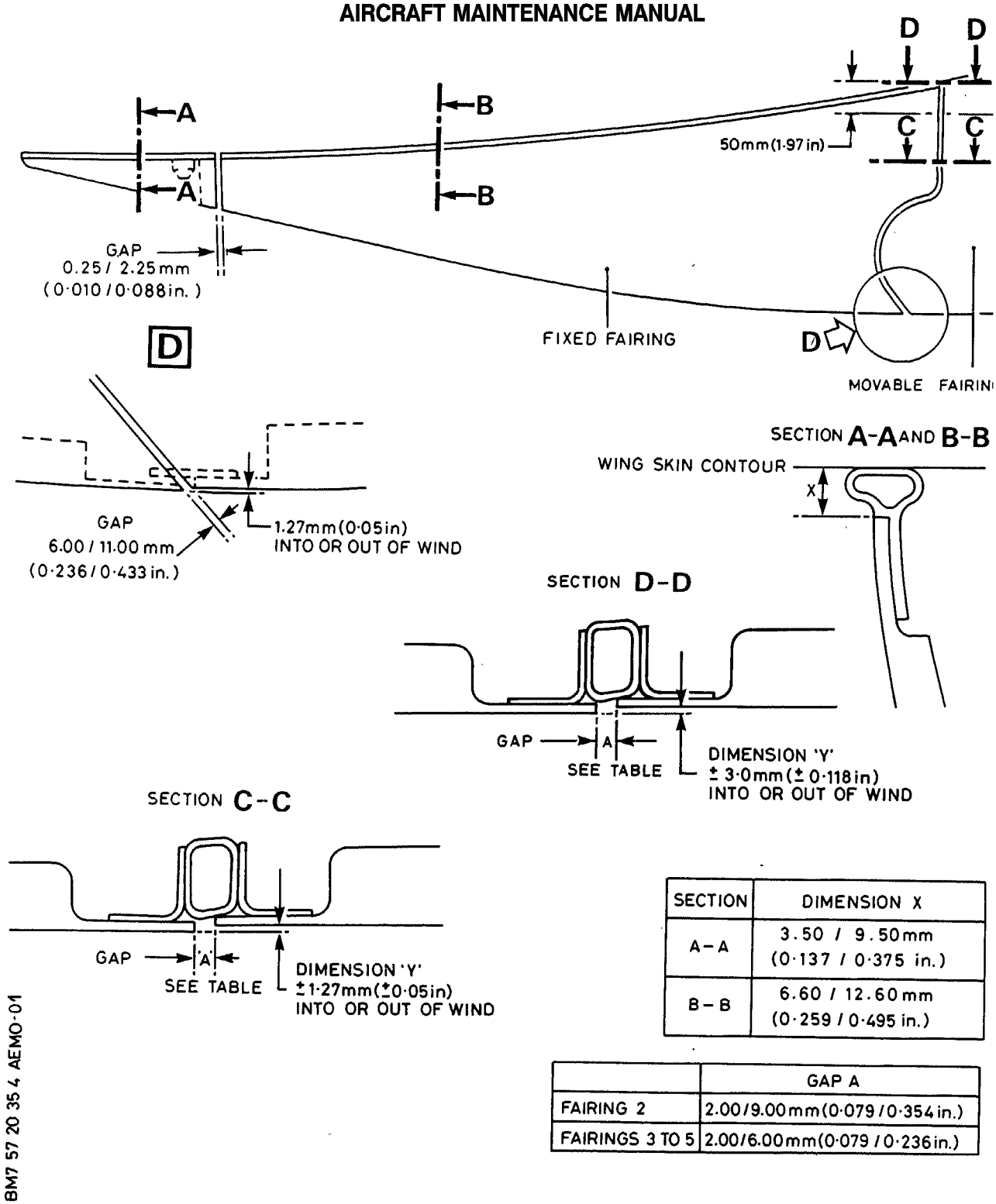
R NOTE : The flap track fairings are located as follows:-
R Fairing No.2 Zone 532(632)
R Fairing No.3 Zone 533(633)
R Fairing No.4 Zone 534(634)
R Fairing No.5 Zone 535(635).

R (2)Removal
R (a)Hold the nose part, access panel 532(632) thru 535(635)AB, and remove
R the screws (4).
R (b)Lower the nose part sufficiently to allow removal of the screw (5) and
R the washers (9) that hold the bonding lead (10) to the flanged nut
R (14). Remove the nose part then temporarily refit the screw (5) and
R the washers (9) to the flanged nut (14).
R (c)Remove the hole plugs (2) at the intermediate (track 2 only) and the
R aft attachment points.
R (d)Hold the rear part, access panel 532(632) thru 535(635)BB, and remove



Flap Track Fixed Fairing Installation
Figure 401

R



SECTION	DIMENSION X
A-A	3.50 / 9.50mm (0·137 / 0·375 in.)
B-B	6.60 / 12.60mm (0·259 / 0·495 in.)

	GAP A
FAIRING 2	2.00/9.00mm(0·079/0·354in.)
FAIRINGS 3 TO 5	2.00/6.00mm(0·079/0·236in.)

BM7 57 20 35 4 AEMO-01

R Flap Track Fixed Fairing Installation Details
Figure 402

R the bolts (3) and the washers (11) at the intermediate (track 2 only) and the aft attachment points. Remove the fairing (the weight is approximately 7.0 kg (15.0 lb)) to a suitable trestle.
R (e)Applicable only if a new fairing is being installed. Remove the screws (6) and the washers (9) that hold the bonding leads (12) to the forward attachment bracket (1), remove the bolt (7) and the bracket (1), complete with the eyebolt (8). Loosely attach the forward attachment bracket (1) and the nose part to the rear part of the fairing. Refit the hole plugs (2) at the intermediate (track 2 only) and the aft attachment points.
R (f)If the fairing has been removed for access, make sure that the rubber seals are intact and undamaged.

R (3)Preparation of Replacement Component
R (a)Remove the hole plugs (2) from the intermediate (track 2 only) and the aft attachment points.
R (b)Remove the screws (4) and remove the nose part. Disconnect the bonding lead (10) if assembled, by removing the screw (5) and the washers (9) from the flanged nut (14).

R (4)Installation
R (a)Clean and inspect the interface area of the fairing and the wing surface.
R (b)Use common grease (Material No. 04-004) and lightly coat the bolts (3).
R (c)Put the rear part of the fairing in position, make sure the brackets engage with the locating spigots, install the bolts (3) and the washers (11). Do not completely tighten the bolts (3) at this stage.
R (d)If the forward attachment bracket (1) has been removed, put it in position on the wing and install the bolt (7). TORQUE the bolt (7) to between 1.6 and 1.8 m.daN (140 and 160 lbf.in.). Adjust the eyebolt (8) to obtain the correct alignment of the bolts (3) and to achieve the dimension X clearances (Ref. Fig. 402). Tighten the locknuts (13) and safety with lockwire. Connect the bonding leads (12) with the screws (6) and the washers (9) (Ref. 20-28-11, P. Block 1).
R (e)Spray the complete assembly at the forward attachment bracket (1) with special materials (Material No. 05-027).
R (f)Hold the nose part and install the bonding lead (10) with the screw (5) and the washers (9) to the flanged nut (14) (Ref. 20-28-11, P. Block 1).
R (g)Use common grease (Material No. 04-004) and lightly lubricate the shanks of the screws (4). Put the nose part in position and install the screws (4). TORQUE the screws (4) to between 0.8 and 0.9 mdaN (70 and 80 lbf.in.).
R (h)TORQUE the bolts (3) at the intermediate (track 2 only) and the aft attachment points to between 1.6 and 1.8 m.daN (140 and 160 lbf.in.) and install the hole plugs (2).
R (j)Make sure that the gaps and the into and out of wind steps are within limits (Ref. Fig. 402).

R NOTE : Dimension 'Y' at the upper 50 mm (1.97 in.) of the gap (Section D-D) should be ± 3 mm (±0.12 in.).

(5)Close-Up
(a)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.
(b)Remove the access platform.

3. WING JACKING-POINT FAIRING 575EB(675EB)

A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 4 m (13 ft)
B.	Brush
C.	Lint-Free Cloth
D. Material No. 04-004	Common Grease (Ref. 20-31-00)
E. Material No. 05-027	Special Materials (Ref. 20-31-00)
R F. Material No. 11-026	Cleaning Agent (Ref. 20-31-00)
Referenced Procedures	

B. Procedure
(Ref. Fig. 403)

Removal/Installation

NOTE : The removal/installation procedure is the same for the LH or the RH fairing (2).

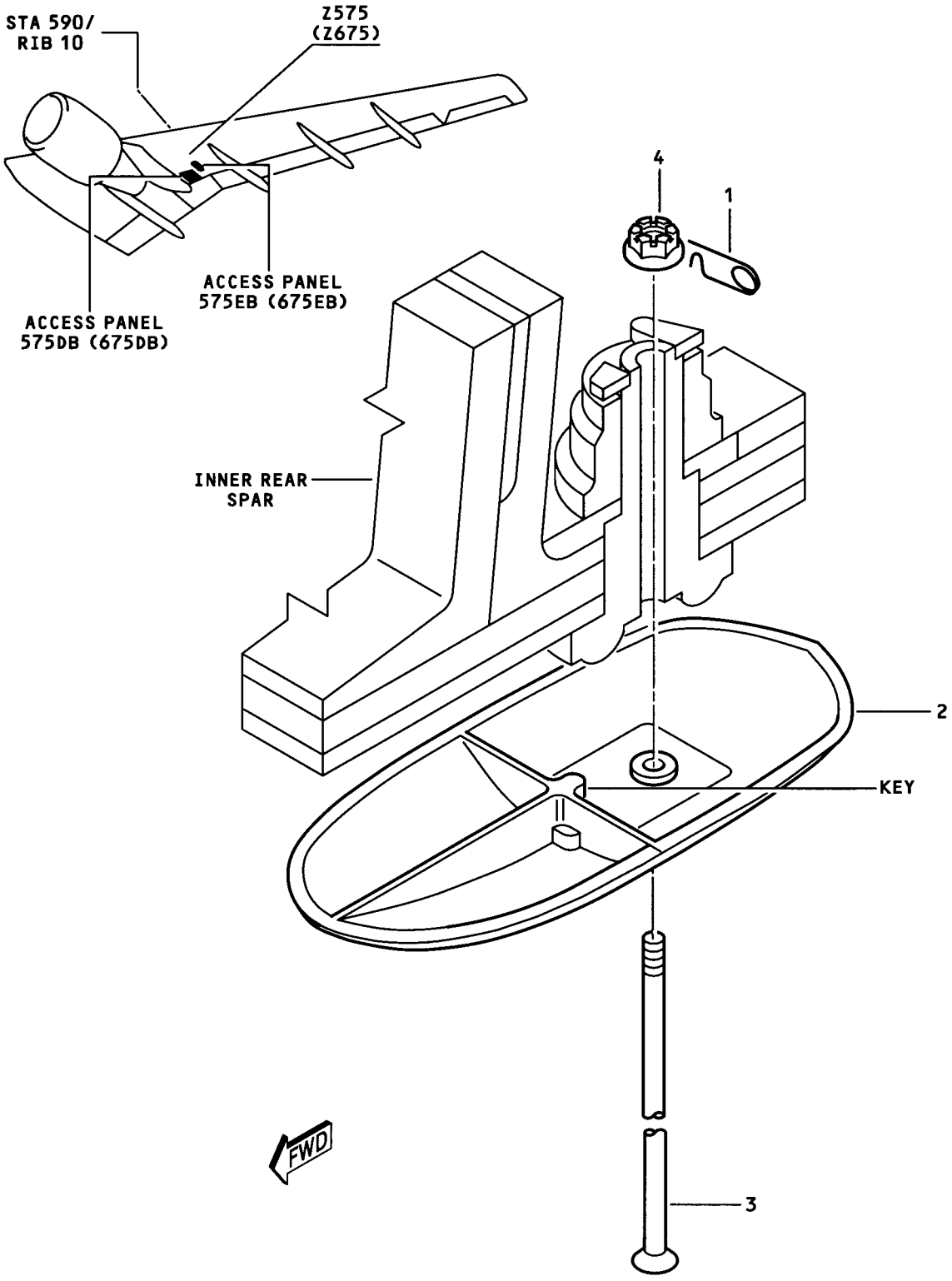
(1)Job Set-Up
(a)Put the access platform in position below zone 575(675).
(b)Open the access door(s) 575DB(675DB) to get access to the upper attachment of the fairing (2).

(2)Removal
(a)Remove the retaining pin (1), the nut (4) and the screw (3).
(b)Carefully remove the fairing (2) from the wing jacking-point structure at STA590/RIB 10.

NOTE : The fairing (2) has an integral key. This key is to correctly align the fairing (2) with a machined slot in the jacking-point structure.

(3)Preparation of Replacement Component
R (a)Use a clean lint-free cloth moistened with cleaning agent (Material
R No. 11-026) to make sure that the items that follow are clean and in
R the correct condition:
- the retaining pin (1)
- the fairing (2)
- the screw (3)
- the nut (4)
- the wing jacking-point recess and bore.

(b)Applicable only if a new and undrilled screw (3) is to be installed.



Wing Jacking-Point Fairing 575EB(675EB)
Figure 403

R

1 Make sure that the key of the fairing (2) is correctly aligned.
2 Put the fairing (2) in position on the wing jacking-point structure and install the screw (3) and the nut (4).
3 Firmly tighten the screw (3) and the nut (4) to make sure that the fairing (2) is securely installed.
4 Drill a 1.26 mm (0.05 in.) hole in the new screw (3), make sure that the hole aligns between the castellations of the nut (4).
5 Make sure that the retaining pin (1) correctly engages in the new screw (3) drilling and the nut (4).
6 Remove the retaining pin (1), the nut (4), the screw (3) and the fairing (2) from the wing jacking-point.
7 Deburr the drilled hole of the new screw (3) and remove all waste material caused by the drilling process.
8 Do the cleaning procedure again (Ref. Para. 3.B.(3)(a).

(4)Installation
(a)Apply a coat of common grease (Material No. 04-004) to the key of the fairing (2).
(b)Make sure that the key of the fairing (2) is correctly aligned.
(c)Put the fairing (2) in position on the wing jacking-point structure and install the screw (3) and the nut (4). Align the nut (4) on the screw (3), to permit the retaining pin (1) to be installed.
(d)Install the retaining pin (1).
(e)Use a brush to apply a film of special material (Material No. 05-027) to the heads of the screw (3), the nut (4) and the retaining pin (1).

(5)Close-Up
R (a)Make sure that the work area is clean and clear of tools and all other
R items of equipment.
(b)Close the access door(s) 575DB(675DB).
(c)Remove the access platform.

WARNINGS : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND CHOCKS ARE IN POSITION.

FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE IN POSITION.

1. Reason for the job

To inspect the internal and external surface of the fairing for contamination by moisture and/or hydraulic fluid.

A. Do a pencil hardness test on the inner surface of the flap-track fixed fairings.

B. Do the corrosion pressure test on the outer surface of the flap-track fixed fairings.

2. Pencil Hardness Test

A. Equipment and Materials

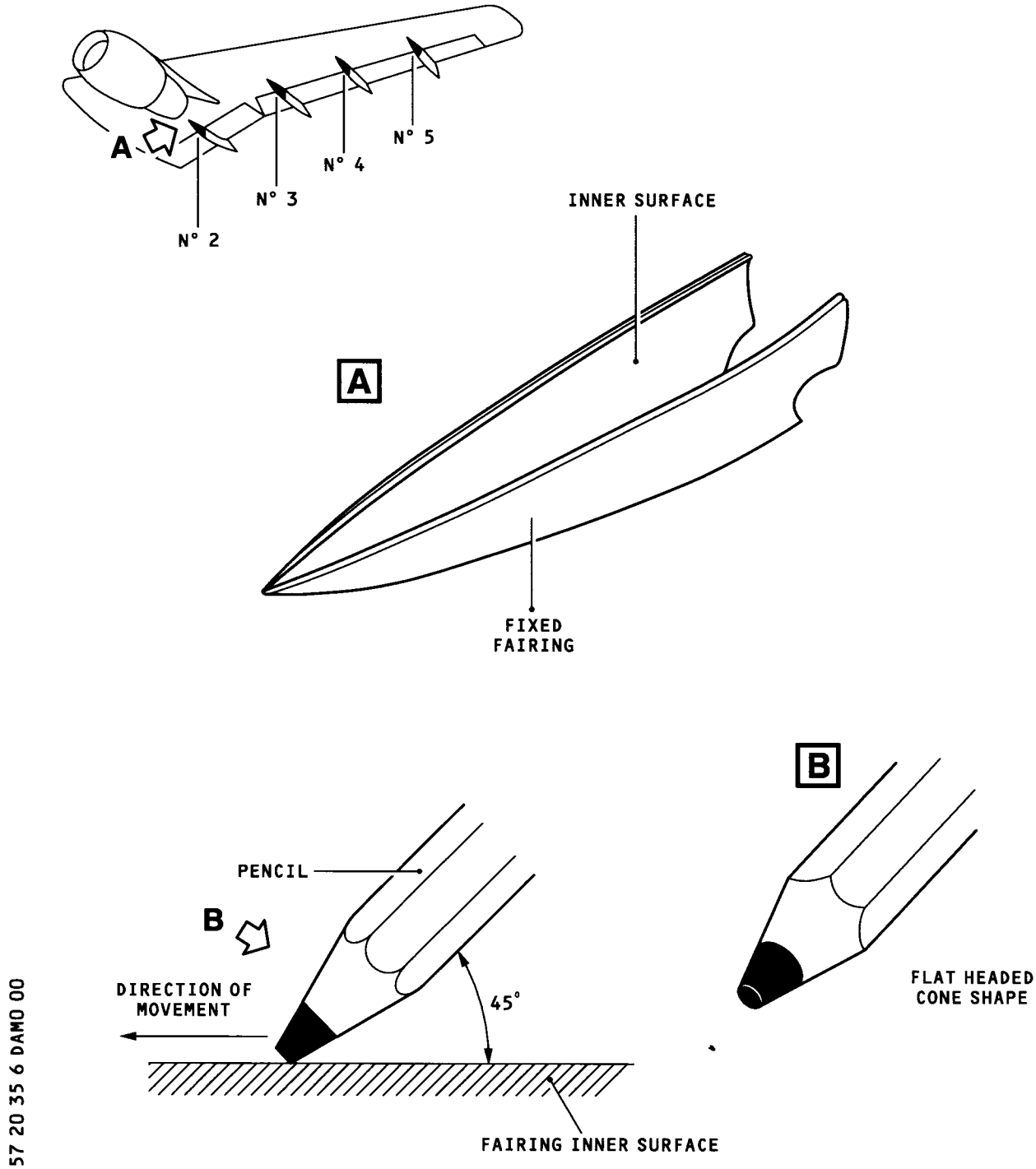
ITEM	DESIGNATION
A.	Abrasive Paper 400 grit or finer
B.	Felt-Tip Pen
C.	Pencils grades 2H, 4H, 6H and 8H
Referenced Procedures	
- 51-10-09, P. Block 101	NTM - Visual Inspection
- 57-20-35, P. Block 401	Fillets and Fairings
- 57-20-35, P. Block 701	Fillets and Fairings
- 57-20-35, P. Block 201	SRM - Flap Track Fairings

B. Procedure
(Ref. Fig. 601)

(1)Job Set-Up.
(a)Remove the applicable fixed fairing (Ref. 57-20-35, P. Block 401).
(b)Make sure that the fairing is clean and dry (Ref. 57-20-35, P. Block 701).
(c)Square the tip of each pencil as follows:
1 Hold the pencil in a vertical position.
2 Move the pencil forward and backward across the abrasive paper.

NOTE : The tip of each pencil must be kept square throughout the test by frequent use of the abrasive paper.

(d)Put the fairing to be tested, in a horizontal position.
(e)Do the hardness test with the pencils in the order type 8H first then,



Pencil Hardness Test - Fixed Fairing
Figure 601

6H, 4H and 2H.

NOTE : Pencil type 8H is the hardest pencil and type 2H is the softest pencil.

(2)Procedure.

NOTE : Do the pencil hardness test immediately after cleaning the fairing.

(a)Hold the 8H pencil at a 45 degree angle and with a firm, steady pressure, push it across the surface of the fairing. Move the pencil parallel to the fiber direction of the surface ply.
(b)Do step (2) (a) again, with each grade of pencil in the correct order of pencil hardness. When the fairing surface has been cut or scratched, note the type of pencil used.
(c)For fairing No. 2:
1 Do the test over the whole of the inner surface of the fairing, with a grid pattern of 50 mm (2 in).
2 Use a felt-tip pen to mark each grid with the grade of pencil that just did not cut or scratch the fairing surface.
(d)For fairing Nos. 3 thru 5:
1 Do the test on suspected areas detected by the visual inspection (Ref. NTM 51-10-09, P. Block 101), with a grid pattern of 50 mm (2 in).
2 Use a felt-tip pen to mark each grid with the grade of pencil that just did not cut or scratch the fairing surface.

(3)Evaluation procedure.
(a)The areas of damage to the fairing hardness are put into groups in table 401.

NOTE : The fairing hardness is the hardness of the pencil that just did not cut or scratch the fairing surface.

PENCIL HARDNESS	2H - 4H	6H	8H
DEGREE OF SURFACE ATTACK BY SKYDROL	HEAVY	LIGHT	NONE

Table 401

(b)Use a felt-tip pen to mark the areas of light and heavy attack on the fairing.
(c)Repair the fairing as required, (Ref. SRM 57-20-35, P. Block 201).

(4)Close-Up.

(a)Install the applicable fairing (Ref. 57-20-35, P. Block 401).
(b)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

3. Corrosion Pressure Test

A. Equipment and Materials

ITEM	DESIGNATION
A.	Corrosion Pressure Test Tool (Local Manufacture)
B.	Felt-Tip Marker Pen
Referenced Procedures	
- 51-10-09, P. Block 101	NTM - Visual Inspection
- 57-20-35, P. Block 401	Fillets and Fairings
- 57-20-35, P. Block 701	Fillets and Fairings
- 57-20-35, P. Block 201	SRM - Flap Track Fairings

B. Procedure
(Ref. Fig. 602)

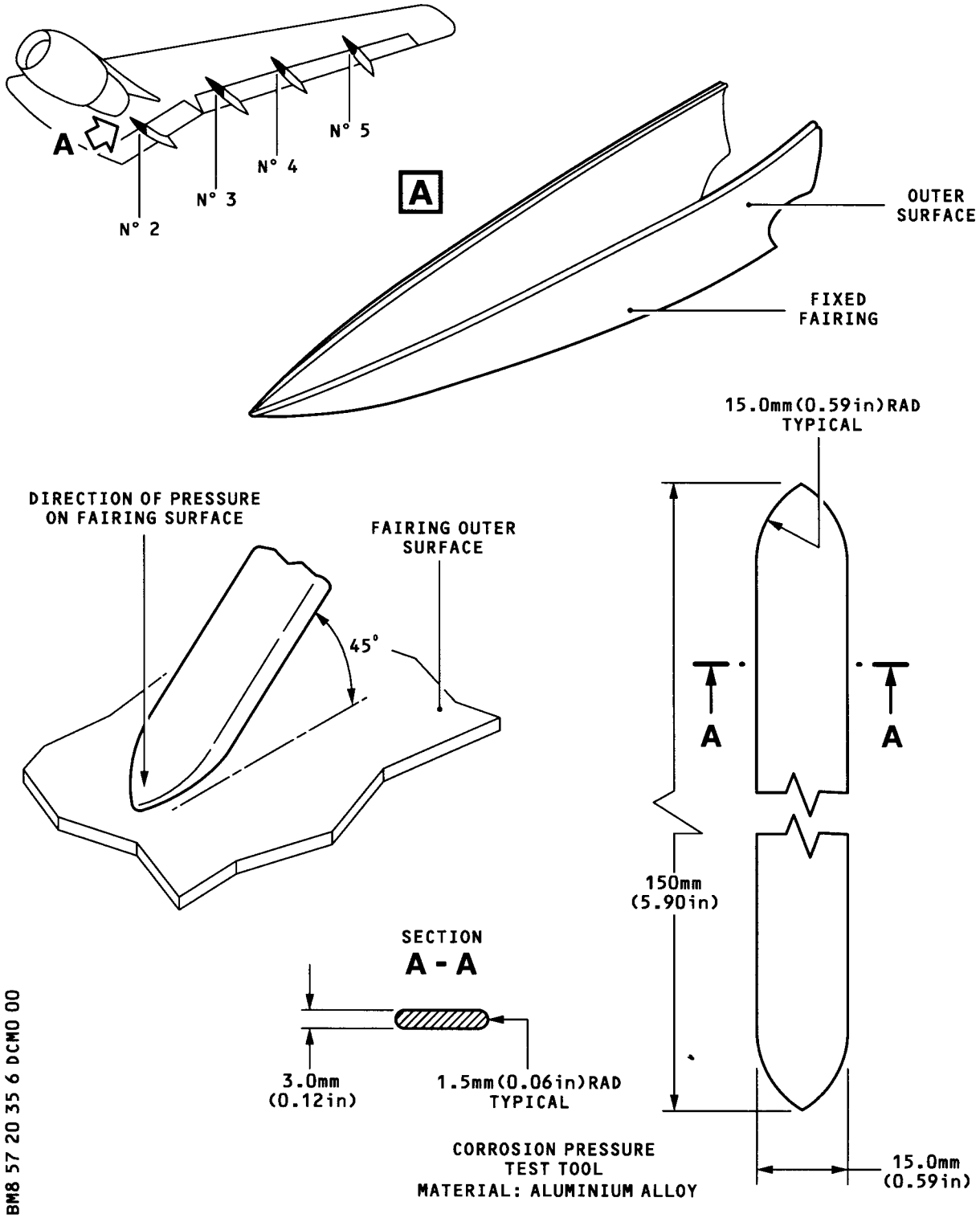
(1)Job Set-Up.
(a)Remove the applicable fixed fairing (Ref. 57-20-35, P. Block 401).
(b)Make sure that the fairing is clean and dry (Ref. 57-20-35, P. Block 701).

(2)Procedure.
(a)Carefully push the end of the corrosion-pressure test tool against the surface of the fairing, with a grid pattern of 25 mm (1 in). Do a very carefull check of the potted areas that follow:
- around brackets
- around fasteners,
and in suspected areas detected by visual inspection (Ref. NTM 51-10-09, P. Block 101).
(b)Use a felt-tip pen to mark the areas where core corrosion has been found.

NOTE : Core corrosion is where the surface of the fixed fairing can be pushed (in) easily without damage to the surface being caused.

(3)Evaluation procedure.
(a)Areas where the surface can not be pushed (in) easily, the core will be in good condition
(b)Areas where the surface can be pushed (in) easily without damage to the surface, are areas where the core is corroded.
(c)Repair the fairing as required, (Ref. SRM 57-20-35, P. Block 201).

(4)Close-Up.
(a)Install the applicable fairing (Ref. 57-20-35, P. Block 401).
(b)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.



Corrosion Pressure Test - Fixed Fairing
Figure 602

FILLETS AND FAIRINGS - CLEANING/PAINTING

WARNING : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND CHOCKS ARE IN POSITION.

FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE IN POSITION.

1. General.

WARNING : DO NOT INGEST LIQUIDS. DO NOT INHALE FUMES. DO NOT ALLOW THE MATERIALS TO CONTACT YOUR SKIN OR SPLASH INTO YOUR EYES.

A. Obey the manufacturer's instructions when you work with cleaning materials.
B. Observe the general safety precautions that follow:
   - Comply with the applicable local regulations.
   - Apply the cleaning materials in well ventilated areas.
   - Wear an apron, protective gloves, and goggles or a face mask.
C. If excessive fume inhalation - move to fresh air and obtain medical aid. Do not walk the patient about.
D. If the skin is contaminated, immediately wash it off with water.
E. If the eyes are contaminated, irrigate the eyes with water and get medical aid.

2. Reason for the Job.

A. To clean the flap-track fixed fairing.
B. To do a pre-bond clean of a damaged area of flap-track fixed fairing.
C. To do a water break test of the flap-track fixed fairing.
D. To dry the flap-track fixed fairing.

3. Equipment and Materials

ITEM	DESIGNATION
A.	Brush, Soft Bristle
B.	Brush, Stiff Bristle
C.	Cotton Gloves
D.	Container, 10 liter (2.6 US gal)
E.	De-ionised or Distilled water, 0.5 liter (0.13 US gal)
F.	Hose connected to the normal mains-water system
G.	Lint-Free Cleaning Cloths
H.	Masking Film, made of Polyethylene, Polyester, FEP or Nylon
J.	Masking Tape - Polyester, Nylon or PTFE with a

ITEM	DESIGNATION
	Rubber based or fully cured Silicone adhesive
K	Oven, Air Circulated
L.	Polyethylene Bottle, 1 liter, with a small spray nozzle
M.	Polyethylene Cover
N.	Pressure-Sensitive Adhesive tape
P.	Protective Apron
Q.	Protective Gloves
R.	Protective Goggles or Face Mask
S.	Scotch Brite, Very Fine
T.	Spatula - Soft plastic
U.	Vacuum Cleaner
V. Material No. 11-001A	Cleaning Agents (Ref. 20-31-00)
W. Material No. 11-010	Cleaning Agents (Ref. 20-31-00)
Referenced Procedures	
- 57-20-35, P. Block 401	Fillets and Fairings
- 57-20-35, P. Block 601	Fillets and Fairings

4. Procedure.

A. Job Set-Up.
(1)Remove the applicable flap-track fixed fairing (Ref. 57-20-35, P. Block 401).

B. General Cleaning.
(1)Examine the fairing for obvious damaged areas which are to stay dry during the cleaning procedure.
(2)Use a clean lint-free cloth to remove all moisture and dirt in and around the damaged area(s).
(3)Use a clean lint-free cloth moistened with cleaning agent (Material No. 11-010) to clean in and around the damaged area(s).
(4)Cover the damaged area(s) with masking film.
(5)Smooth the masking film to the shape of the damaged area(s).
(6)Hold each corner of the masking film in position with small pieces of adhesive tape.
(7)Put adhesive tape along all the edges of the masking film. If the masking film is folded, hold down the fold with a piece of adhesive tape. Make sure that the tape around the edges covers the edge of the masking film at the fold.
(8)Use a soft plastic spatula or your fingers to press down on the surface of the adhesive tape. Push any air bubbles to the edge and out.
(9)Make sure that the edges of the masking film are firmly held down with adhesive tape so that water can not get into the damaged area(s).

C. Cleaning the non damaged area of the Fairing.

WARNING : OBEY THE APPLICABLE SAFETY PRECAUTIONS.

(1)Use lint-free cloths to clean the fairing as much as possible.
(2)Prepare the cleaning solution in a suitable container in accordance with the manufacturers instructions. Use a mix ratio of 1:10 up to 1:20 cleaning agent (Material No. 11-001A) to water. For very greasy areas use a mix ratio of 1:2 cleaning agent (Material No. 11-001A) to water.
(3)Use a soft bristle brush to apply the cleaning solution to the inside and outside of the fairing. For the cleaning solution to take effect it must stay on the fairing for 15 minutes.
(4)Use a stiff bristle brush or a cloth, to scrub the wet surface of the fairing.

CAUTION : WHEN YOU USE A HOSE TO RINSE THE CLEANING SOLUTION OFF THE FAIRING, MAKE SURE THAT, TO PREVENT DAMAGE TO THE FAIRING:
- THE WATER PRESSURE IS NOT MORE THAN 0.1 BAR (1.5 psi)
- YOU HOLD THE HOSE AT LEAST 300 mm (12 in) AWAY FROM THE SURFACE OF THE FAIRING.

(5)Use a hose and clean mains water to rinse the cleaning solution off the fairing. Do not use pressurized water or more water than necessary to remove the cleaning solution.
(6)In areas of extensive contamination or if the fairing is still not clean, do the cleaning procedure again.
(7)Use clean, dry, lint-free cloths to carefully dry the fairing at ambient temperature between 15 and 25 deg. C. (60 and 77 deg. F.).

D. Pre-bond Cleaning and Surface Cleanliness Check.

WARNING : OBEY THE APPLICABLE SAFETY PRECAUTIONS.

(1)Clean the fairing in accordance with para 4. A. thru C. before pre-bond cleaning.

CAUTION : WHEN YOU USE SCOTCH BRITE TO SMOOTH THE SURFACE, DO NOT DAMAGE THE FIBERS.

(2)Use very-fine Scotch Brite to smooth the area to be bonded.

CAUTION : DO NOT USE COMPRESSED AIR TO REMOVE THE DUST AS YOU MAY DAMAGE THE FAIRING.

(3)Use a vacuum cleaner to remove the dust.
(4)Use a clean lint-free cloth moistened with cleaning agent (Material No. 11-010) to wipe the surface of the area to be bonded plus a radius of approximately 100 mm (4 in.) beyond it.
(5)Immediately after applying the cleaning agent, use a new clean, dry, lint-free cloth to wipe the area before the cleaning agent evaporates.
(6)Do the procedure again until a clean part of the cloth stays clean after the area has been wiped.
(7)Do the last wipe of the area with a clean, dry lint-free cloth.
(8)Let the fairing dry for between 15 and 45 minutes at ambient temperature between 15 and 25 deg. C. (60 and 77 deg. F.).

E. Water break test.

NOTE : A water break test is done to find out if:
- any oil or grease stays on the surface of the area to be bonded when the cleaning has been completed
- the area can be bonded satisfactorily.

(1)Put the distilled or de-ionised water into a clean, polyethylene bottle that has a small spray nozzle.
(2)Spray the water onto the surface to be bonded until the surface is just covered. Or, use a clean lint-free cloth moistened with distilled or de-ionised water and wipe over the surface to be bonded to leave a thin film of water.
(3)Look at the water on the surface. The water should form a continuous, thin layer over the surface with no areas where the surface tension causes the water to separate into drops or beads. The water should cover all of the surface under test.
(4)Leave the water on the surface for 30 seconds, the water should stay on all of the surface. If the water separates, or drops or beads form within the 30 seconds then, do the pre-bond cleaning procedure again, ref. para 4. D.. Do the water break test again, ref. para 4. E..
(5)Use a clean, dry, lint-free cloth to dry the area.
(6)Let the fairing dry for between 30 minutes and 12 hours at ambient temperature between 15 and 25 deg. C. (60 and 77 deg. F.).

NOTE : Use clean cotton gloves if you need to touch the cleaned area after a satisfactory water break test.

(7)If no repair has started within one hour, put the polythene cover over the fairing to protect the surface from contamination.
(8)To prevent contamination, bonding must begin within 12 hours of the pre-bond cleaning procedure. If bonding is not started within 12 hours then do the pre-bond cleaning procedure and the water break test again, ref. paras. 4. D. and 4. E..

F. Dry the Fairing.
(1)Dry the fairing, to get a bondable surface, in an air circulated oven for one of the times that follows:
- 4 hours at 60 deg. C. (140 deg. F.) or,
- 2 hours at 70 deg. C. (160 deg. F.) or,
- 1 hour at 80 deg. C. (175 deg. F.).

(2)Do a visual check of the fairing surface after drying, for contamination. If signs of skydrol contamination appear on the fairing then do the inspection procedure (Ref. 57-20-35, P. Block 601).

NOTE : During drying, the surface of the fairing can be contaminated by absorbed skydrol.

WARNING : LANDING GEAR - MAKE CERTAIN GROUND SAFETIES AND CHOCKS ARE IN POSITION.

FLIGHT CONTROLS - MAKE CERTAIN GROUND SAFETIES AND NOTICES ARE IN POSITION.

OBSERVE THE SAFETY PRECAUTIONS IN 28-00-00, P. BLOCK 301.

MAKE CERTAIN THAT FIRE FIGHTING EQUIPMENT IS AVAILABLE AND ADEQUATE.

BEFORE POWER IS SUPPLIED TO THE AIRCRAFT MAKE CERTAIN THAT ELECTRICAL CIRCUITS UPON WHICH WORK IS IN PROGRESS ARE ISOLATED.

1. Reason for the Job

A. Remove/Install Panel 550(650)AT

2. Equipment and Materials

ITEM	DESIGNATION
A. Not applicable	
B.	Bolt, 0.3125 in
C.	Torque Wrench 140-160 lbf in (1.58-1.81 m.daN)
D. 98A57304002001	Manhole Bolt Extraction Tool
E. Material No. 04-004	Common Greases (Ref. 20-31-00)
F. Material No. 04-013	Common Greases (Ref. 20-31-00)
G. Material No. 04-004A	Common Grease (Ref. 20-31-00)
H.	Lint-free Cloth
I. Material No. 11-004	Cleaning Agents (Ref. 20-31-00)
J. Material No. 09-002	Sealants (Ref. 20-31-00)
Referenced Procedures	
- 20-28-11, P. Block 1	Electrical Bonding
- 28-00-00, P. Block 301	Fuel - General

3. Procedure

A. Removal

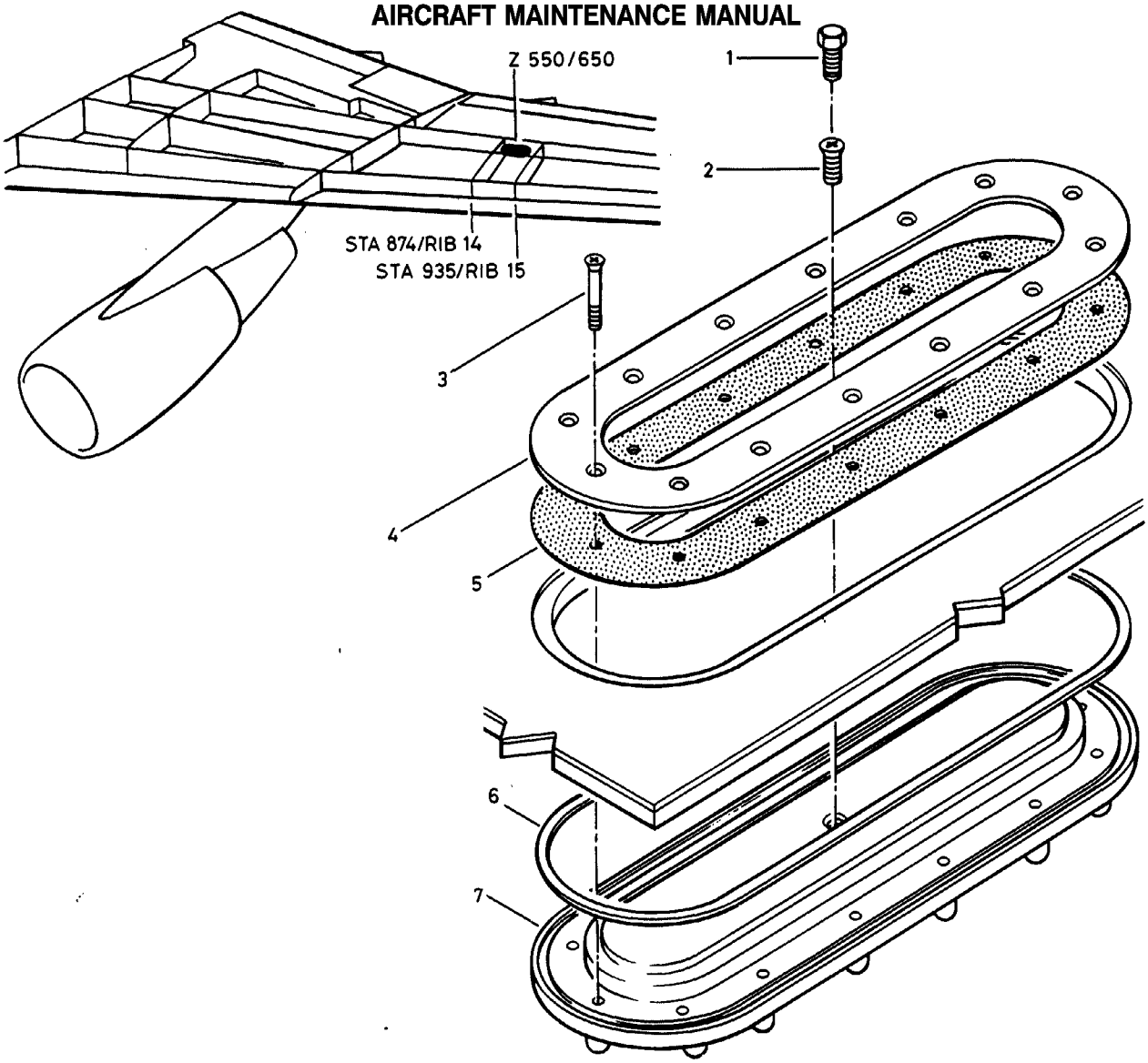
(Ref. Fig. 401)

(1)Remove blanking screw (2).

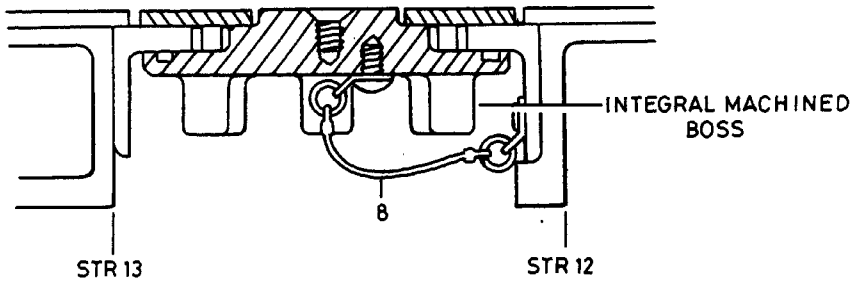
(2)Install bolt (1).

R CAUTION : WHEN USING MANHOLE BOLT EXTRACTION TOOL TO REMOVE BOLTS
R HEAVY PRESSURE MUST BE RELEASED AS SOON AS THE FASTENER
R STARTS TO TURN. THIS IS TO AVOID DAMAGE TO THE ANCHOR
R NUT OR THREAD INSERTS ON THE ACCESS PANEL AND WING SKIN,
R AS APPLICABLE.

(3)Support panel (7) by holding bolt (1) and remove 14 screws (3)



SECTION THROUGH PANEL



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Access Panel 550(650)AT - Installation
Figure 401

R

securing clamp ring (4).
(4)Lower panel (7) to extent of drop cord (8). Disconnect drop cord and remove panel.
(5)Remove clamp ring (4) and knitted gasket (5).

B. Preparation for Installation
(1)Check screws, screw holes, and sealed nuts if fitted for condition, paying particular attention to security of attachment of sealed nuts and domes on sealed nuts.
(2)Thoroughly clean all mating surfaces using cleaning agent (Material No. 11-004) and lint-free cloth.
(3)Inspect sealing ring (6) and knitted gasket (5) for damage or deterioration. If necessary, replace. If fitting new sealing ring, remove old seal, remove all traces of sealant from groove. Clean groove using lint-free cloth and cleaning agent (Material No.11-004).

C. Installation
(1)Apply a thin coat of sealant (Material No.09-002) to groove, and assemble sealing ring while sealant is wet. Take care not to stretch the sealing ring.
(2)Impregnate knitted gasket with grease (Material No.04-013) and install on clamp ring. For a new gasket place gasket carrier tray on a flat surface, package side up, and peel paper cover from carrier tray. Place clamp ring (4) over gasket (5) so that screw holes align and press down firmly. Remove clamp ring, gasket, and release strip as one unit from carrier tray. Remove release strip.
(3)Apply grease (Material No.04-004) to threads of screws (3).
(4)Clear screw holes in clamp ring and gasket of grease.

R CAUTION : EXCESS GREASE AHEAD OF BOLTS CAN GENERATE HYDRAULIC
R PRESSURE AND DAMAGE THE SEALED NUTS (IF FITTED).

(5)Check that tank is clean and clear of tools and other loose equipment.
(6)Connect drop cord (8).
(7)Hold panel (7) in position by bolt (1). Install clamp ring (4) and gasket (5). Engage screws (3) in threads.
(8)Apply grease (Material No.04-004A) to fill cavity between panel (7), clamp ring (4), and aircraft skin.
(9)Tighten screws (3) to 140-160 lbf/in (1.58-1.81 m.daN).
(10)Measure electrical resistance between panel/clamp ring, panel/wing skin, clamp ring/wing skin (Ref. 20-28-11, P. Block 1).

NOTE : Do not probe wing skin.

R (11)Remove holding bolt (1) from panel (7), and apply grease (Material No. 04-004) to thread of blanking screw (2); install blanking screw.

R WARNING : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE IN
R POSITION.

R FLIGHT CONTROLS - BEFORE YOU APPLY OR RELIEVE HYDRAULIC SYSTEM
R PRESSURE, MAKE SURE THAT THE TRAVEL RANGES ARE CLEAR.

R FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE
IN POSITION.

R HYDRAULICS - BEFORE YOU PRESSURIZE THE SYSTEM, MAKE SURE THAT THE
R CONTROL SURFACE POSITIONS AND THE FLIGHT CONTROL POSITIONS ARE THE
R SAME.

R BEFORE AND DURING MAINTENANCE OPERATIONS INSIDE A FUEL TANK - YOU MUST
R OBEY THE SAFETY PRECAUTIONS (REF. 28-00-00, P. BLOCK 301 AND 28-10-00,
R P. BLOCK 301).

R MAKE SURE THAT YOU ISOLATE THE ELECTRICAL CIRCUITS UPON WHICH WORK IS
R IN PROGRESS.

R USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS,
R ONLY WITH A GOOD FLOW OF AIR THROUGH THE WORK AREA. THESE MATERIALS
R ARE POISONOUS, FLAMMABLE AND SKIN IRRITANTS, YOU MUST :
R - OBEY THE MANUFACTURERS INSTRUCTIONS
R - PUT ON PROTECTIVE CLOTHING
R - NOT GET THEM IN YOUR MOUTH
R - NOT SMOKE
R - NOT BREATHE THE GAS
R - GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

1. Equipment and Materials

	ITEM	DESIGNATION
R	A.	Access Platform 4 - 5 m (13 - 16 ft)
R	B.	Applicator and Collapsible Tube
R	C.	Circuit Breaker Safety Clips and Tags
R	D.	Torque Wrench, 0.9 mda.N (80 lbf.in)
R	E.	Warning Notice - Prohibiting Operation of the Slats.
R	F.	Brush for Applying Sealant
R	G.	Lint-Free Cloths
R	H.	Non-Metallic Scraper
R	J.	Protective Caps - Hydraulic pipes
R	K. Material No. 09-005	Sealant (Ref. 20-31-00)
R	L. Material No. 09-007	Sealant (Ref. 20-31-00)
R	M. Material No. 09-017	Sealant (Ref. 20-31-00)
R	N. Material No. 11-004	Cleaning Agent (Ref. 20-31-00)
R	P. Material No. 16-006	Structure Paint (Ref. 20-31-00)

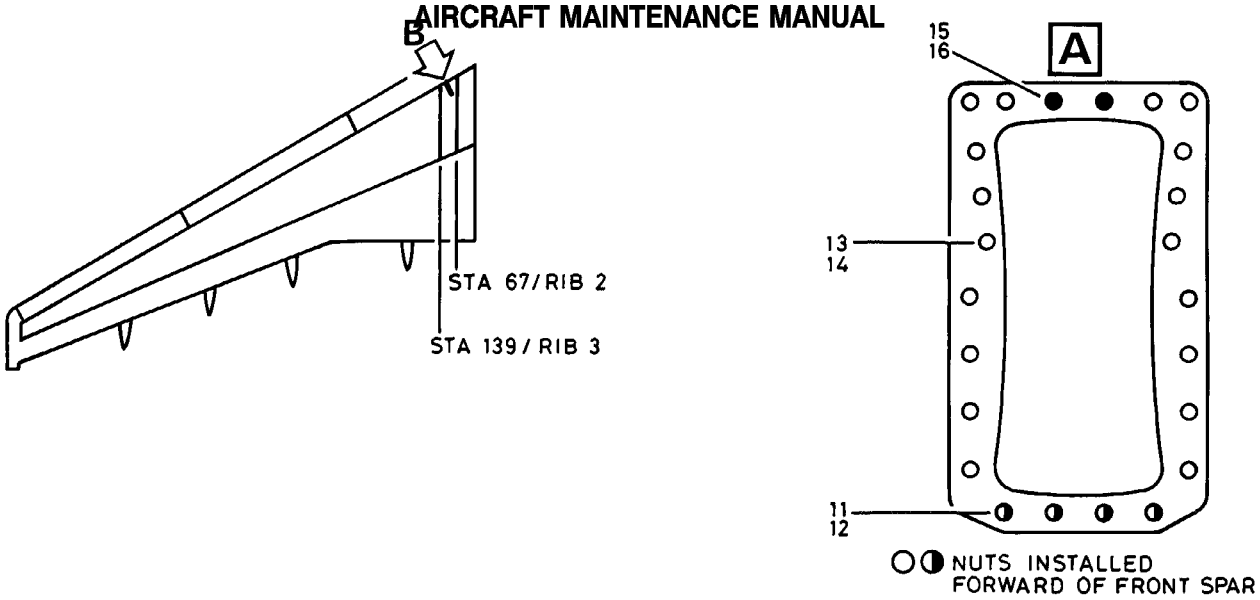
	ITEM	DESIGNATION
R	Q. Material No. 19-010	Lockwire, Corrosion Resistant Steel, 0.8 mm
R		(0.032 in) Diameter (Ref. 20-31-00)
	Referenced Procedures	
	- 06-41-57, P. Block 1	Access Provision - Wing
	- 12-11-28, P. Block 301	Replenishing of Fuel Tanks
R	- 20-23-12, P. Block 1	Specified Torque Values for Unions
	- 27-80-00, P. Block 301	Lift Augmenting (Slats and Krueger Flaps)
	- 27-80-13, P. Block 401	Tracks - Slat 1
	- 27-80-14, P. Block 401	Tracks - Slat 2 and 3
	- 27-84-22, P. Block 401	Screw-jacks 1 thru 4
	- 27-84-23, P. Block 401	Screw-jacks 5 and 6
	- 28-00-00, P. Block 301	Fuel - General
	- 28-00-00, P. Block 401	Fuel - General
	- 28-10-00, P. Block 301	Storage - Servicing
	- 28-11-22, P. Block 401	Manhole Covers - Wings
	- 28-11-24, P. Block 401	Manhole Covers - Booster Pumps
	- 28-25-00, P. Block 301	Refuel/Defuel System
	- 30-00-00, P. Block 401	Ice and Rain Protection - General

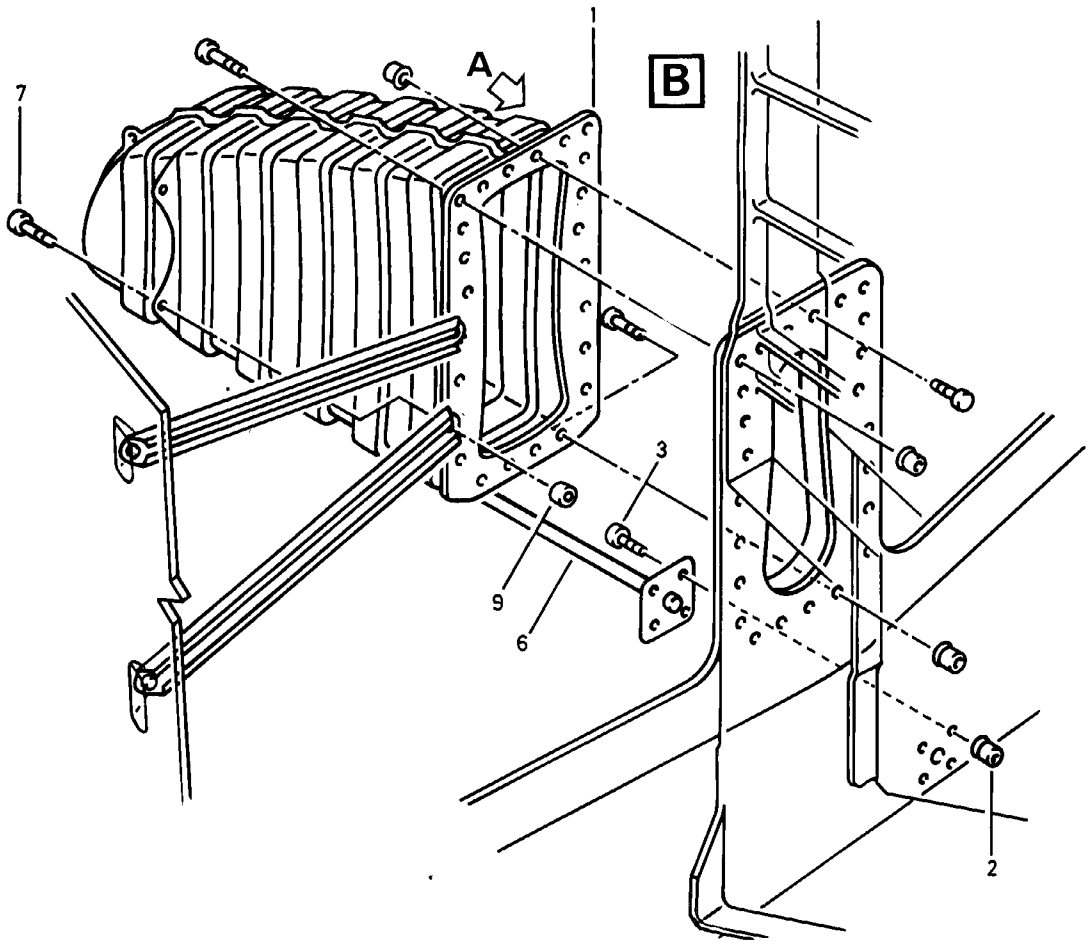
2. Procedure

(Ref. Fig. 401)
(Ref. Fig. 402)
R (Ref. Fig. 403)
(Ref. Fig. 404)
R (Ref. Fig. 405)
(Ref. Fig. 406)
R (Ref. Fig. 407)
(Ref. Fig. 408)
R (Ref. Fig. 409)
(Ref. Fig. 410)
R (Ref. Fig. 411)
(Ref. Fig. 412)
(Ref. Fig. 413)
R (Ref. Fig. 414)
(Ref. Fig. 415)
(Ref. Fig. 416)
(Ref. Fig. 417)
(Ref. Fig. 418)
R (Ref. Fig. 419)
(Ref. Fig. 420)
R (Ref. Fig. 421)
(Ref. Fig. 422)
(Ref. Fig. 423)
R (Ref. Fig. 424)

A. Job Set-up

R (1)Make sure the related fuel tank is empty. Defuel or transfer fuel as
R necessary (Ref. 28-25-00, P. Block 301).





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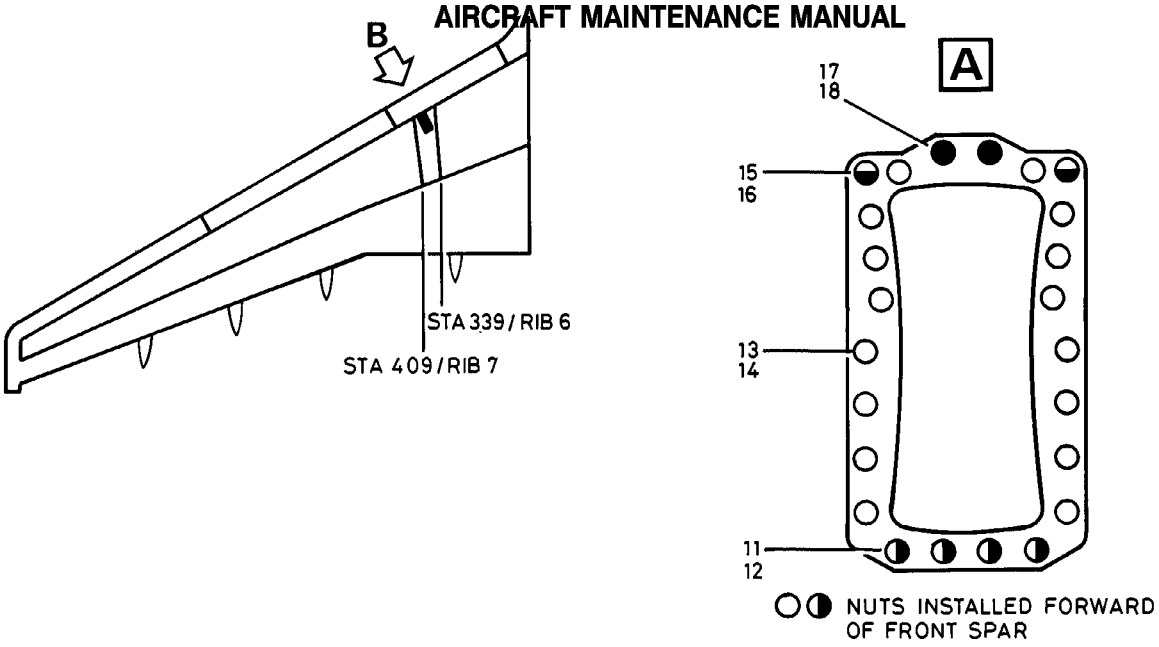
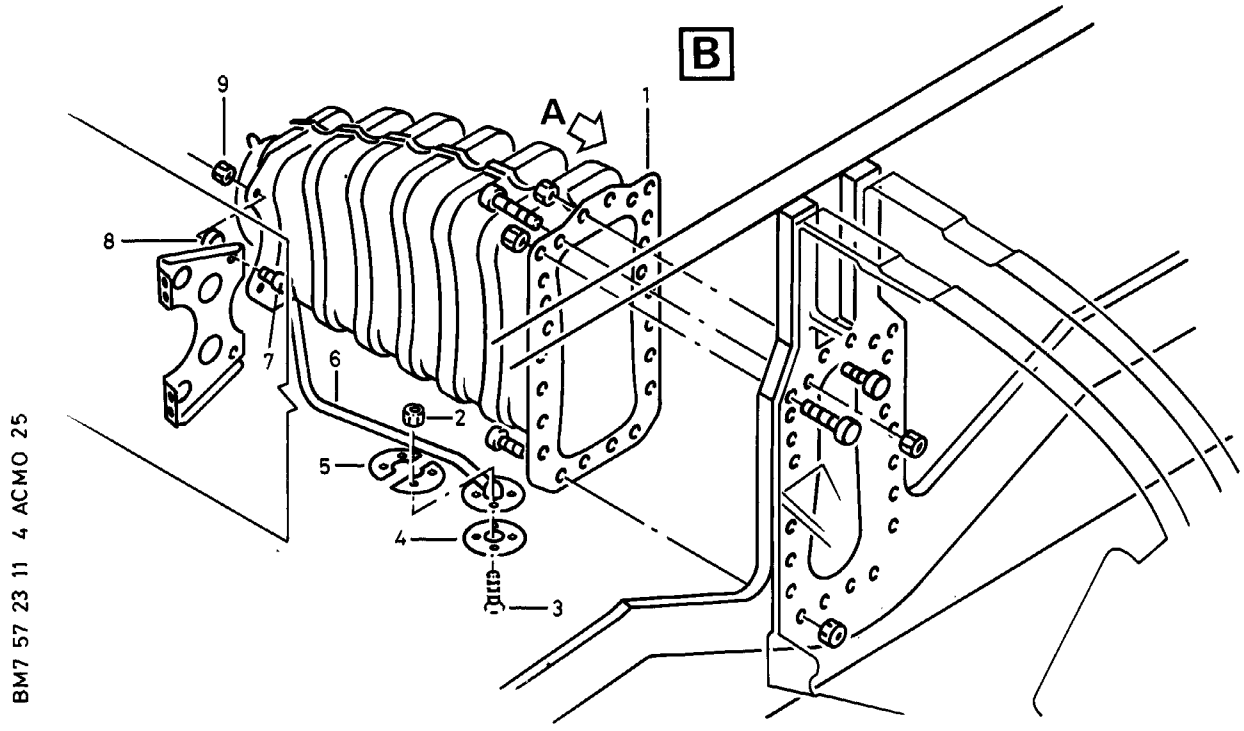
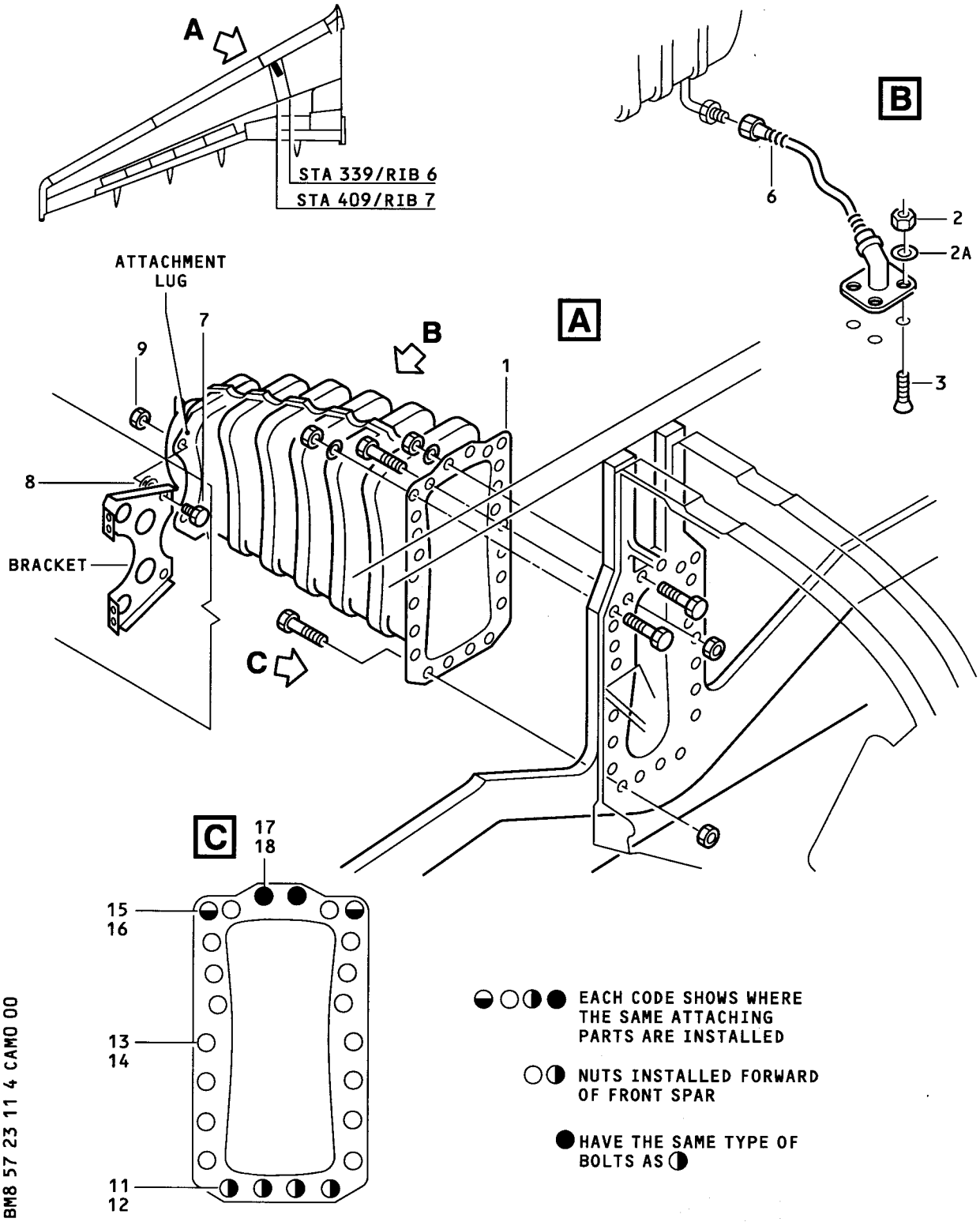
Track Can 1 and Jack Can 1 - Removal/Installation
Figure 401



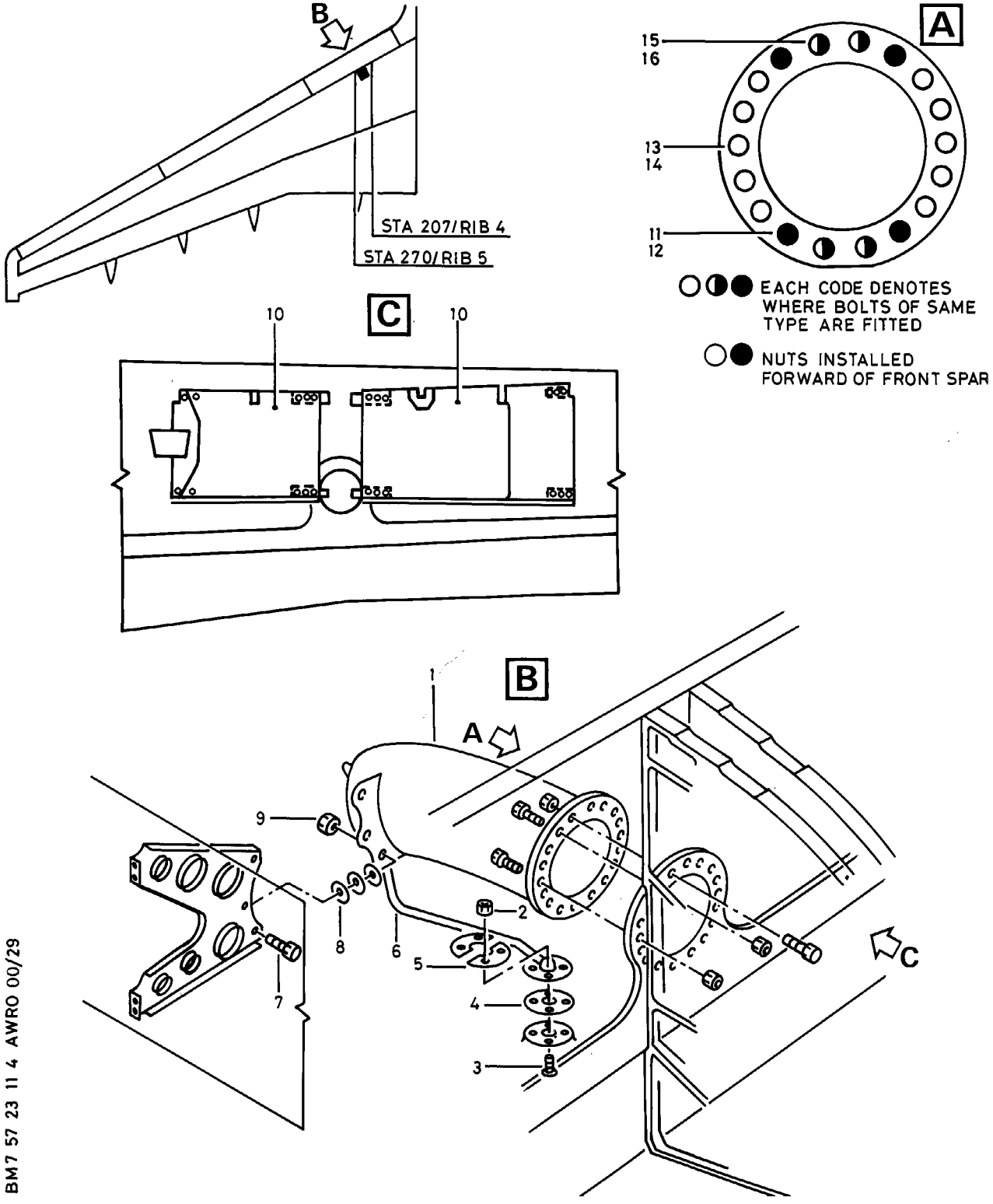


Track Can 3 and Jack Can 2 - Removal/Installation
Figure 402

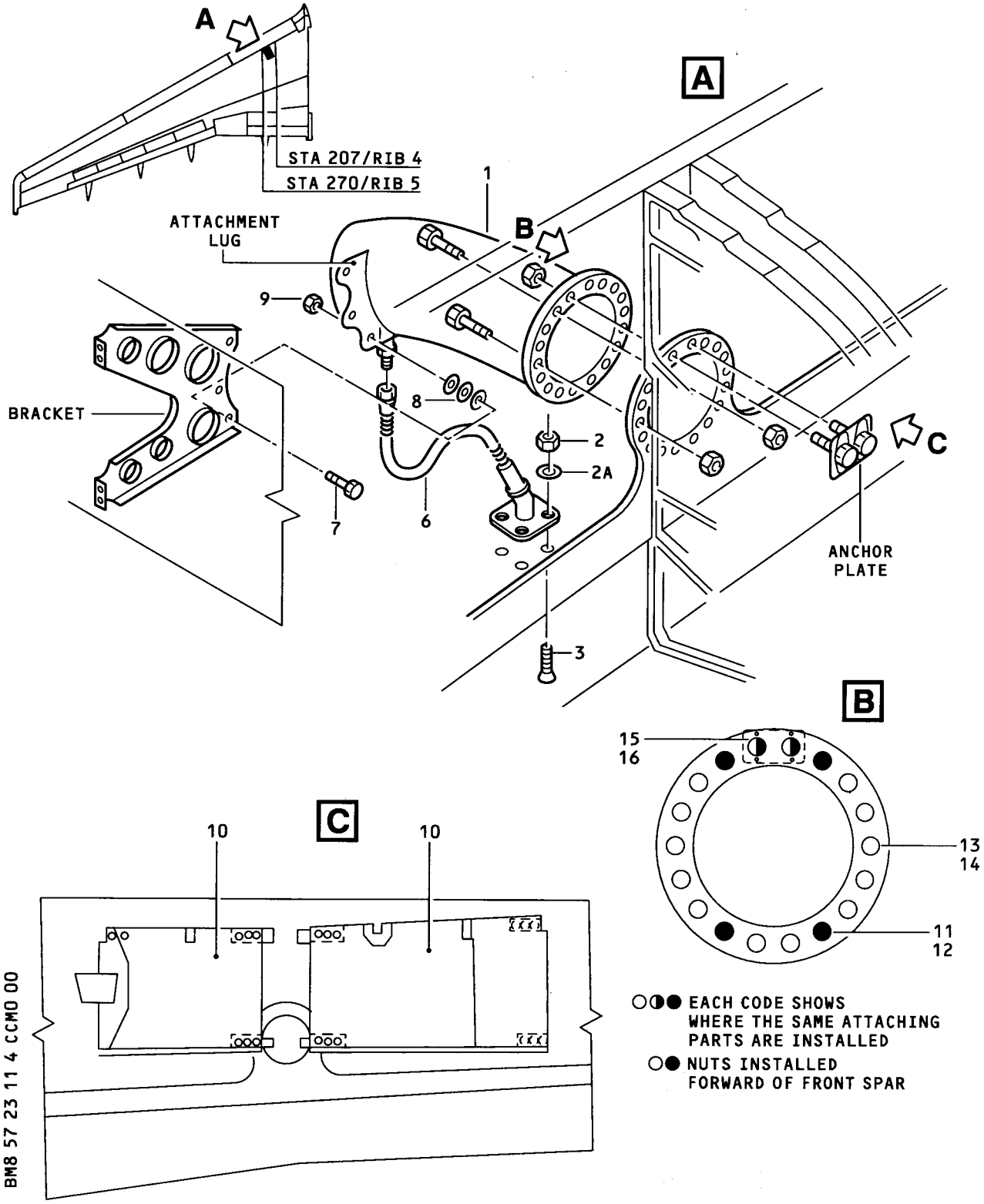


Track Can 3 and Jack Can 2 - Removal/Installation
Figure 403

R

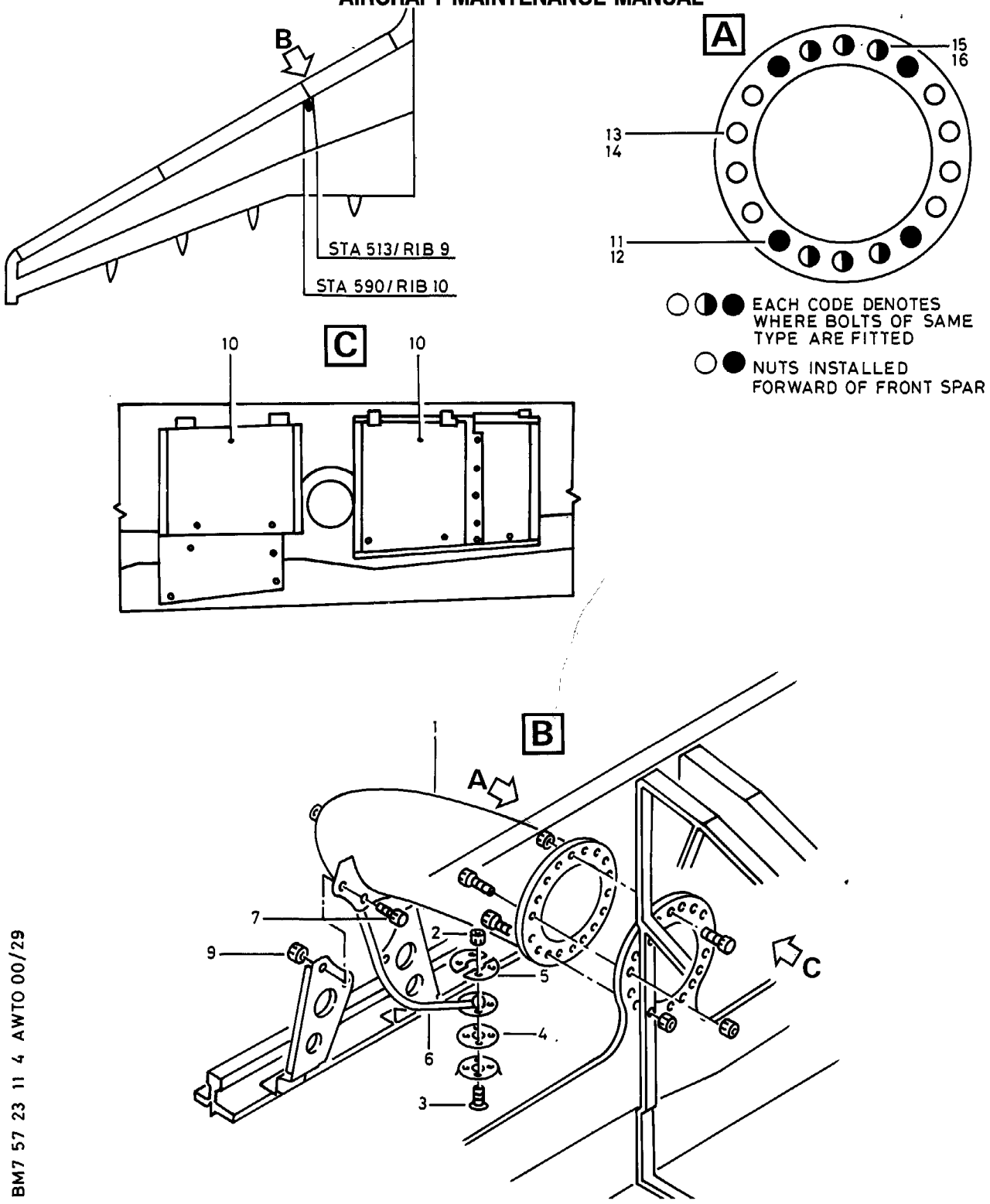


Track Can 2 - Removal/Installation
Figure 404

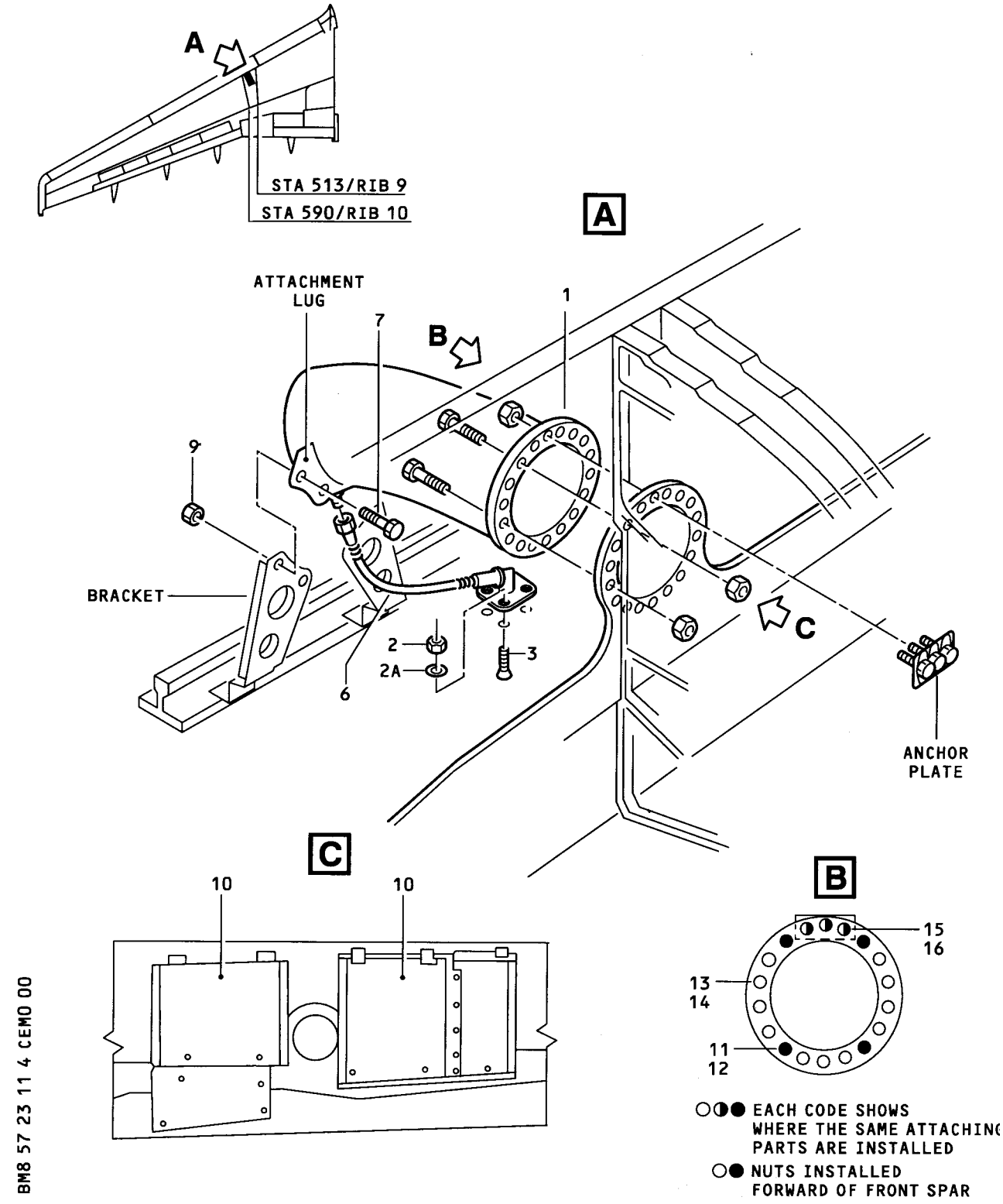


Track Can 2 - Removal/Installation
Figure 405

R

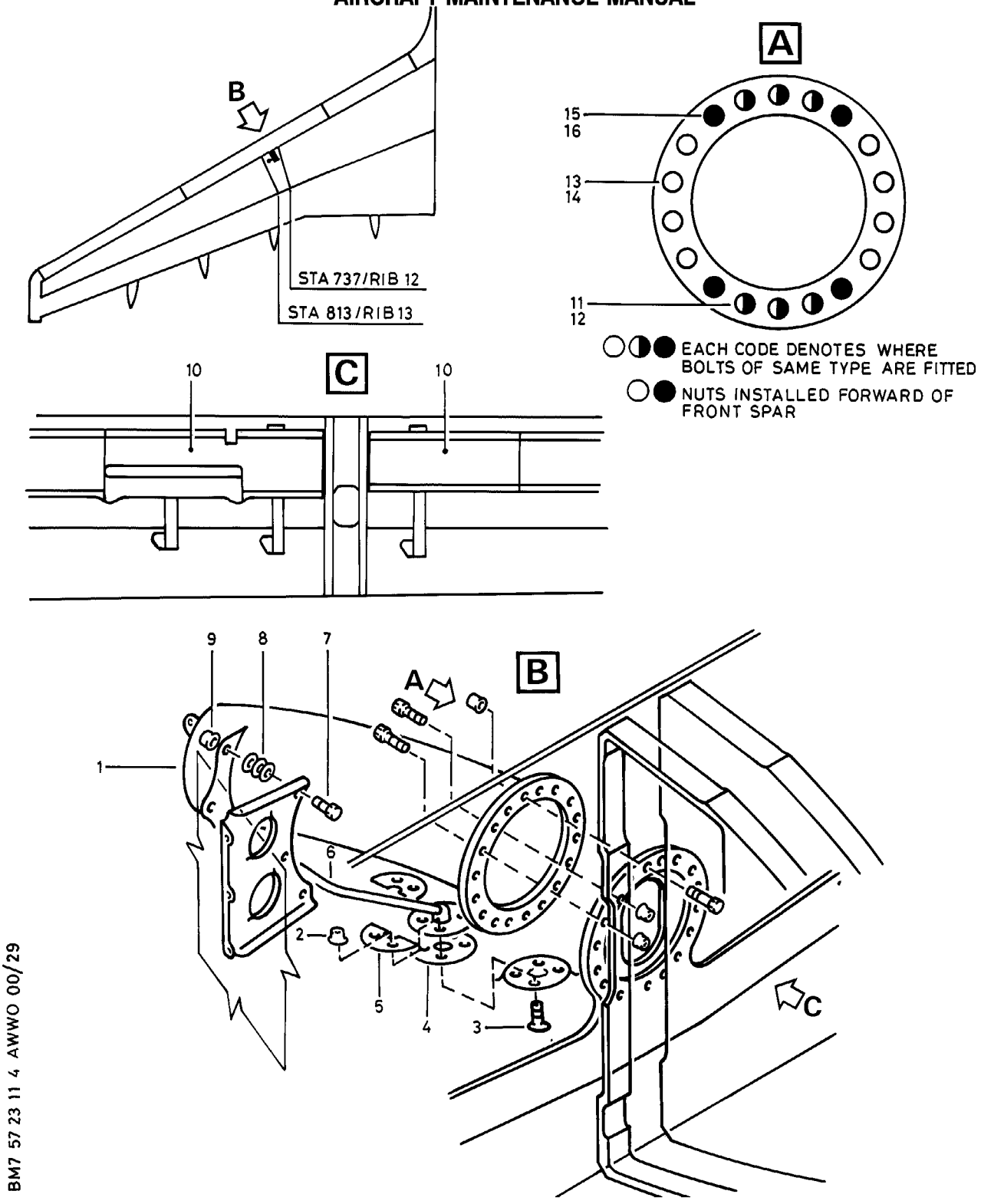


Track Can 4 - Removal/Installation
Figure 406

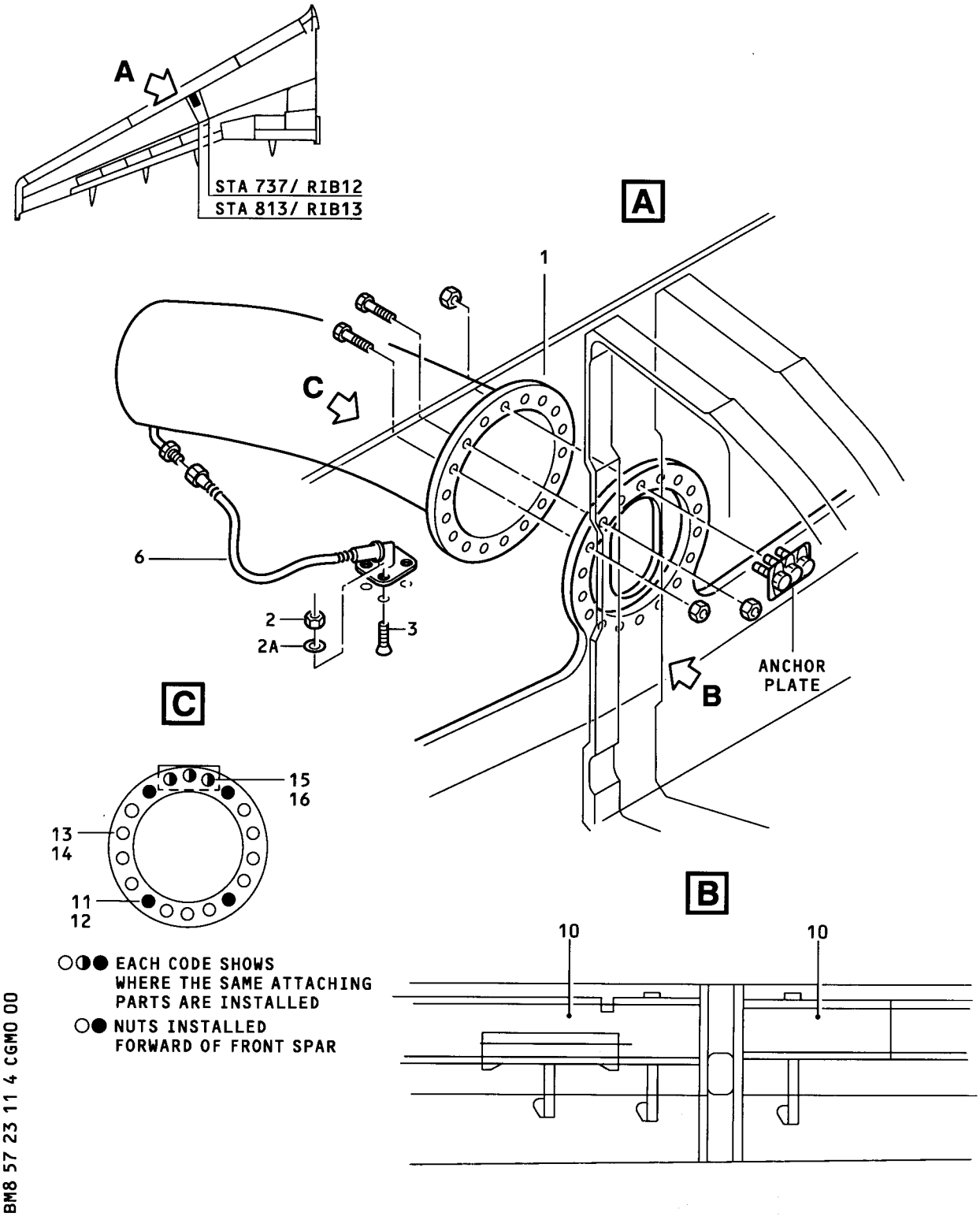


Track Can 4 - Removal/Installation
Figure 407

R

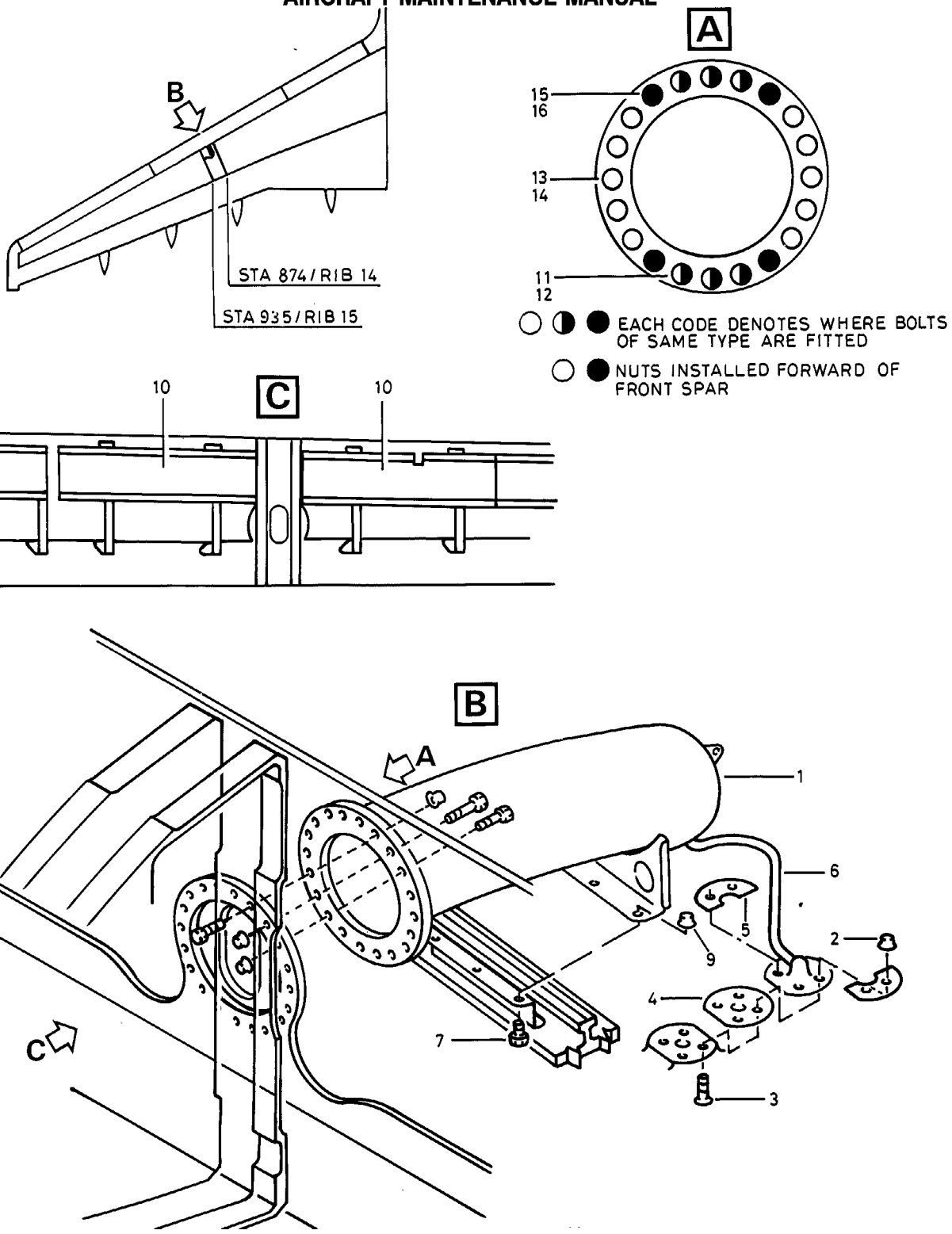


Track Can 5 - Removal/Installation
Figure 408

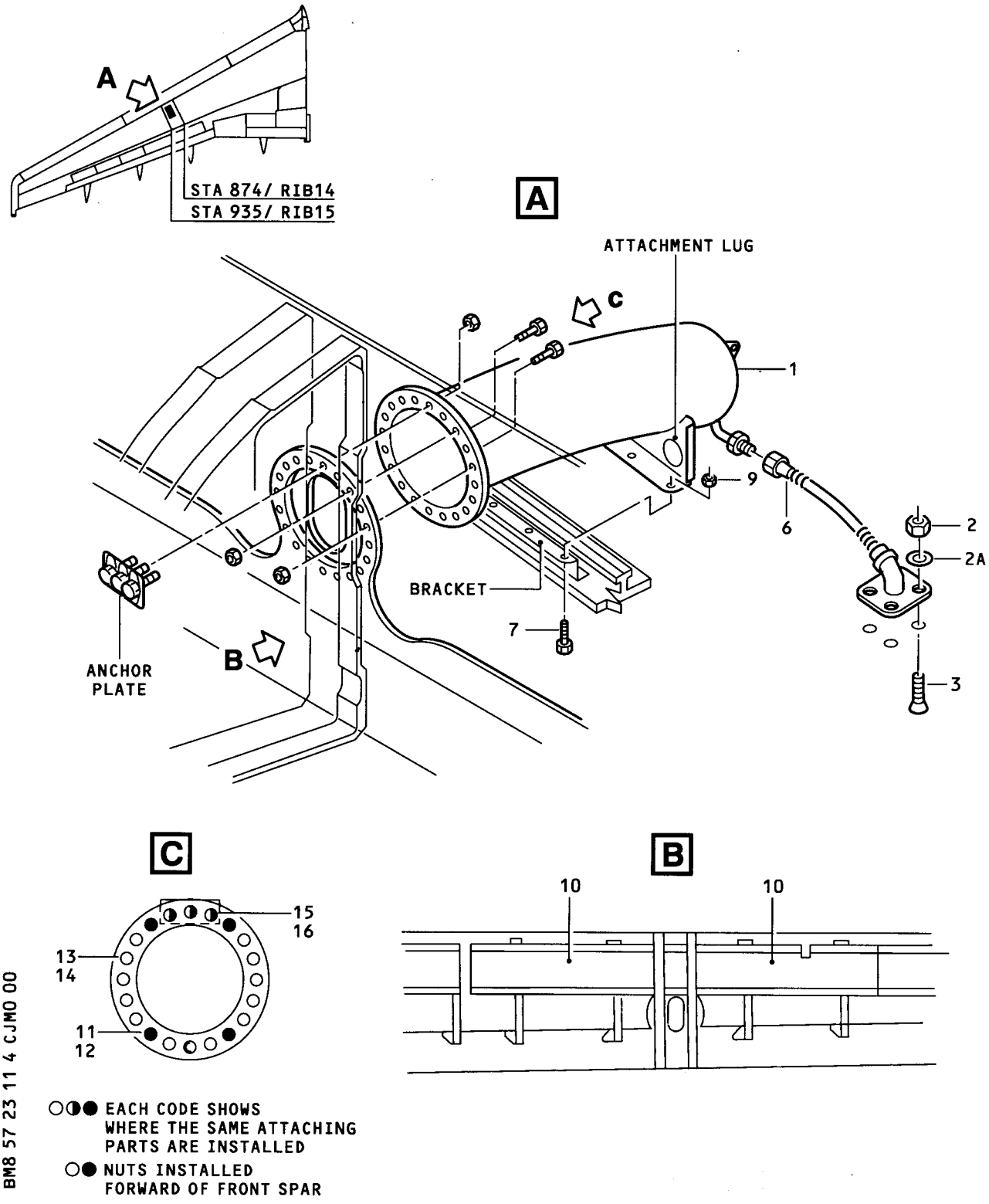


Track Can 5 - Removal/Installation
Figure 409

R

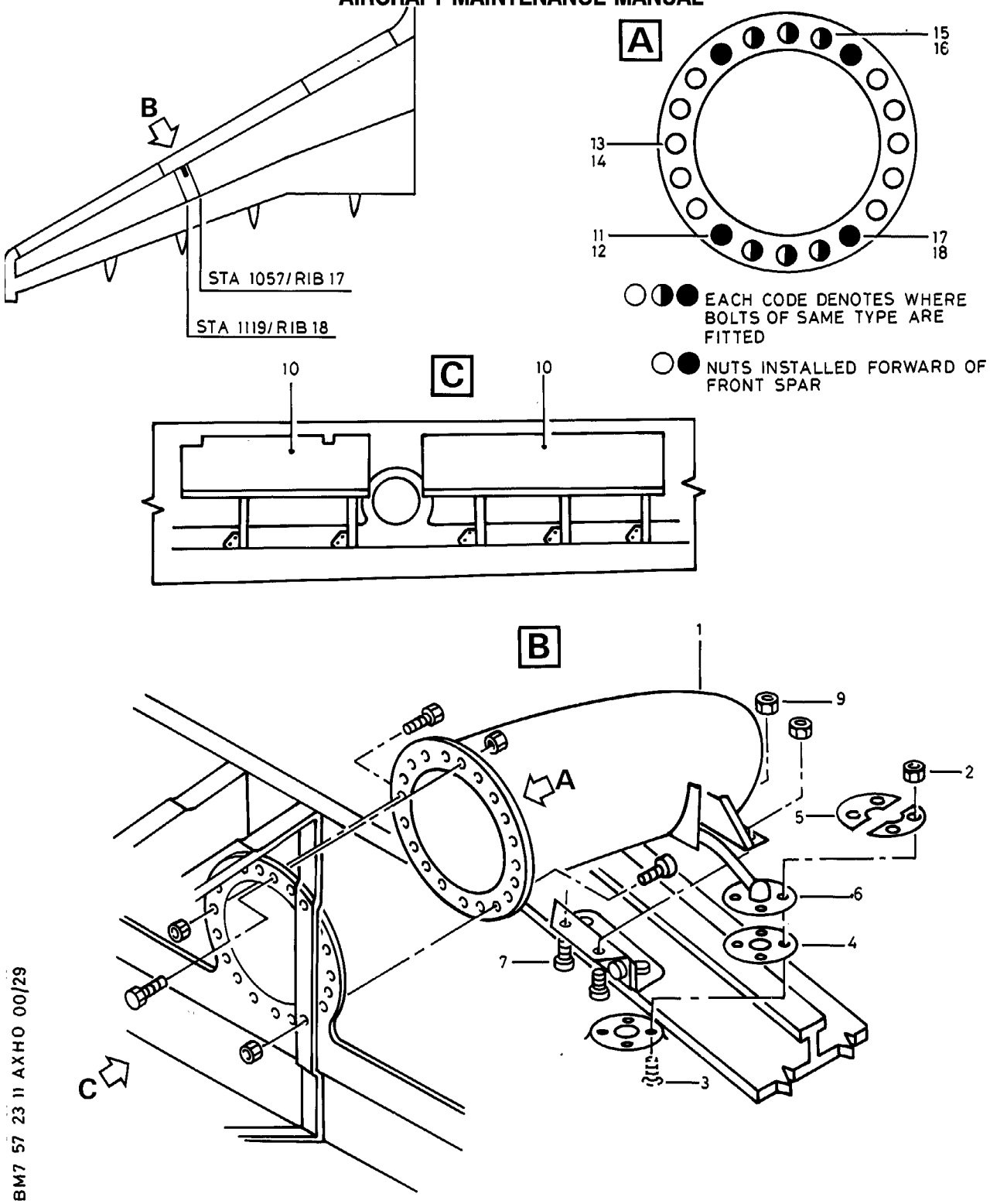


Track Can 6 - Removal/Installation
Figure 410

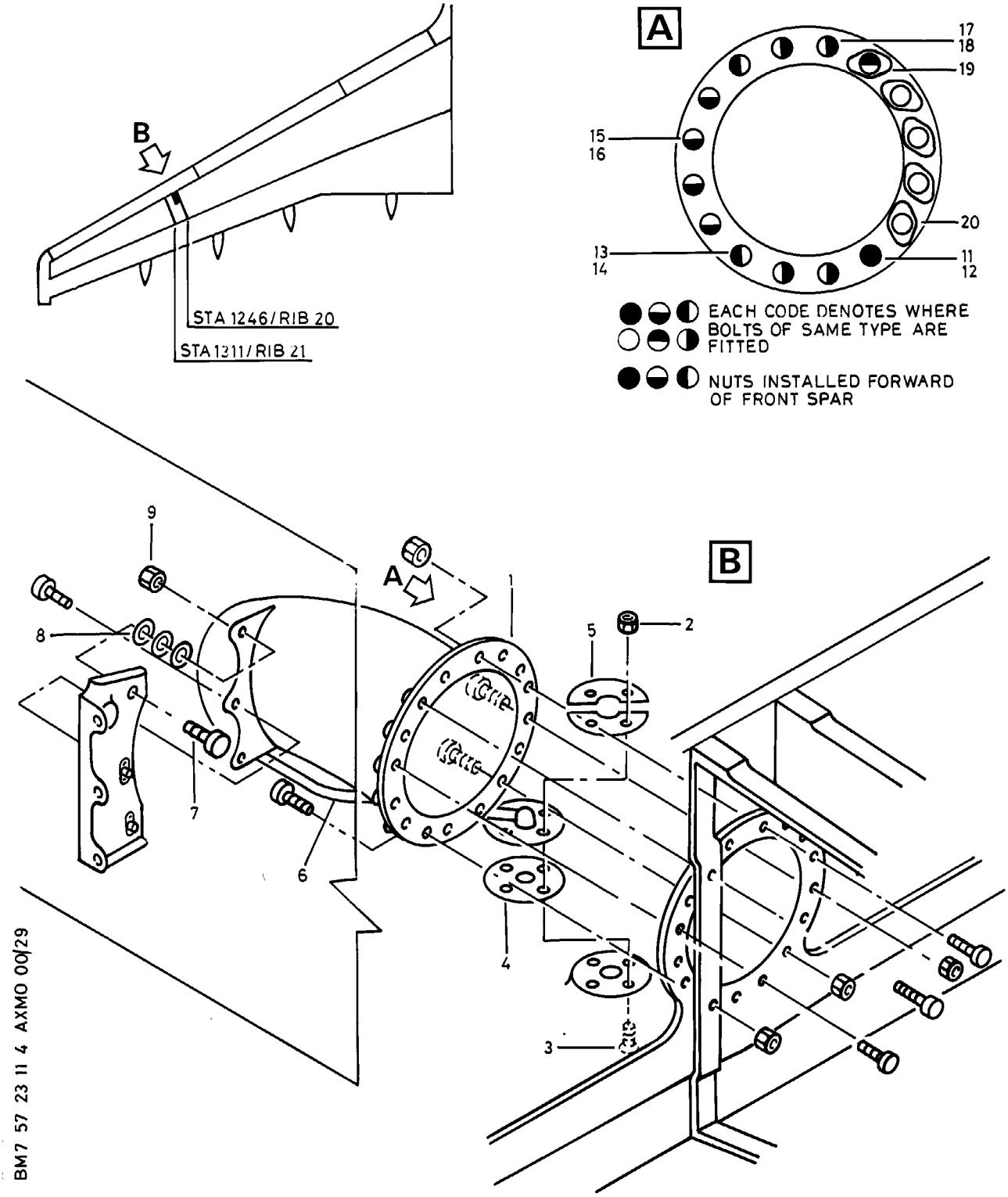


Track Can 6 - Removal/Installation
Figure 411

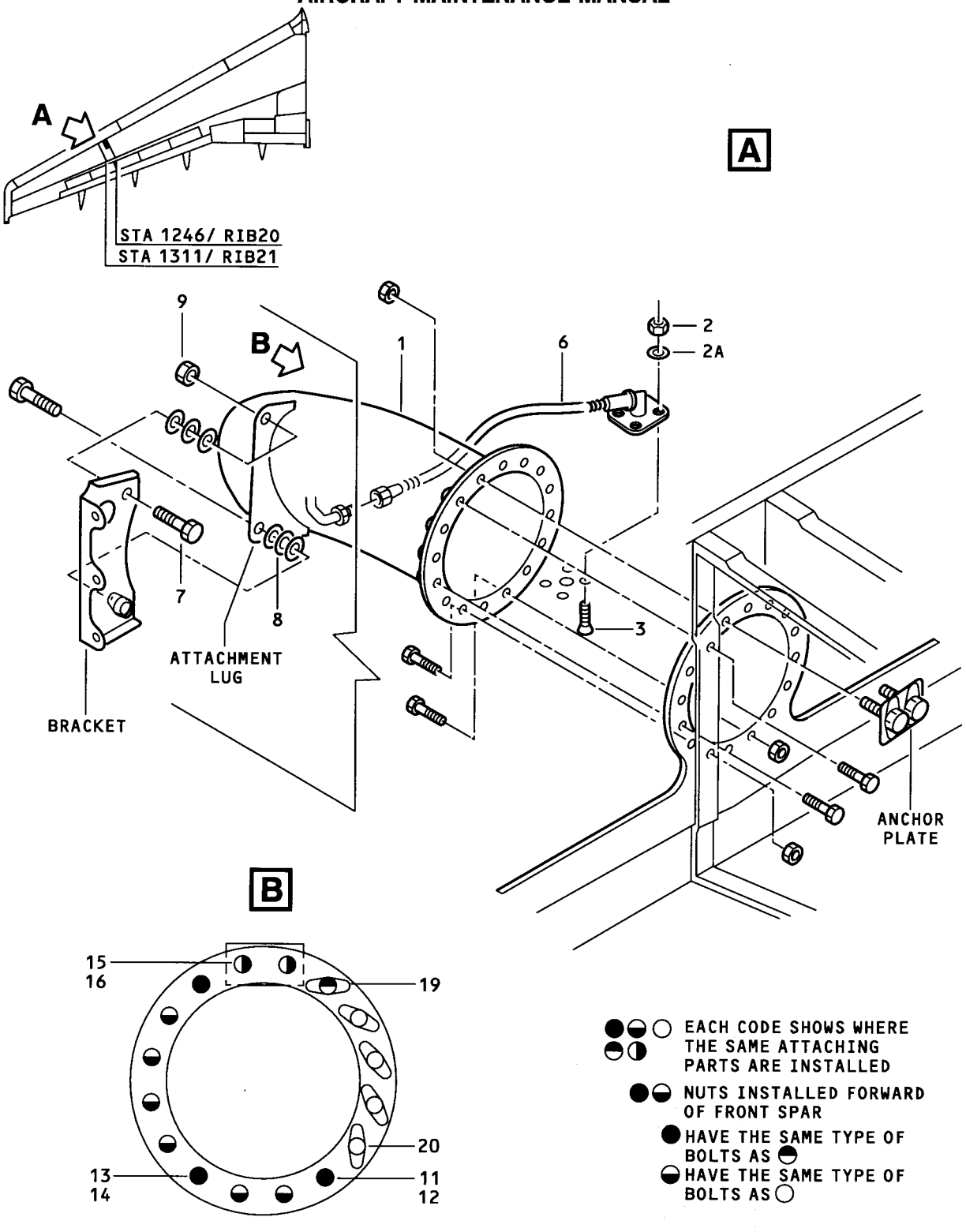
R



Track Can 7 - Removal/Installation
Figure 412

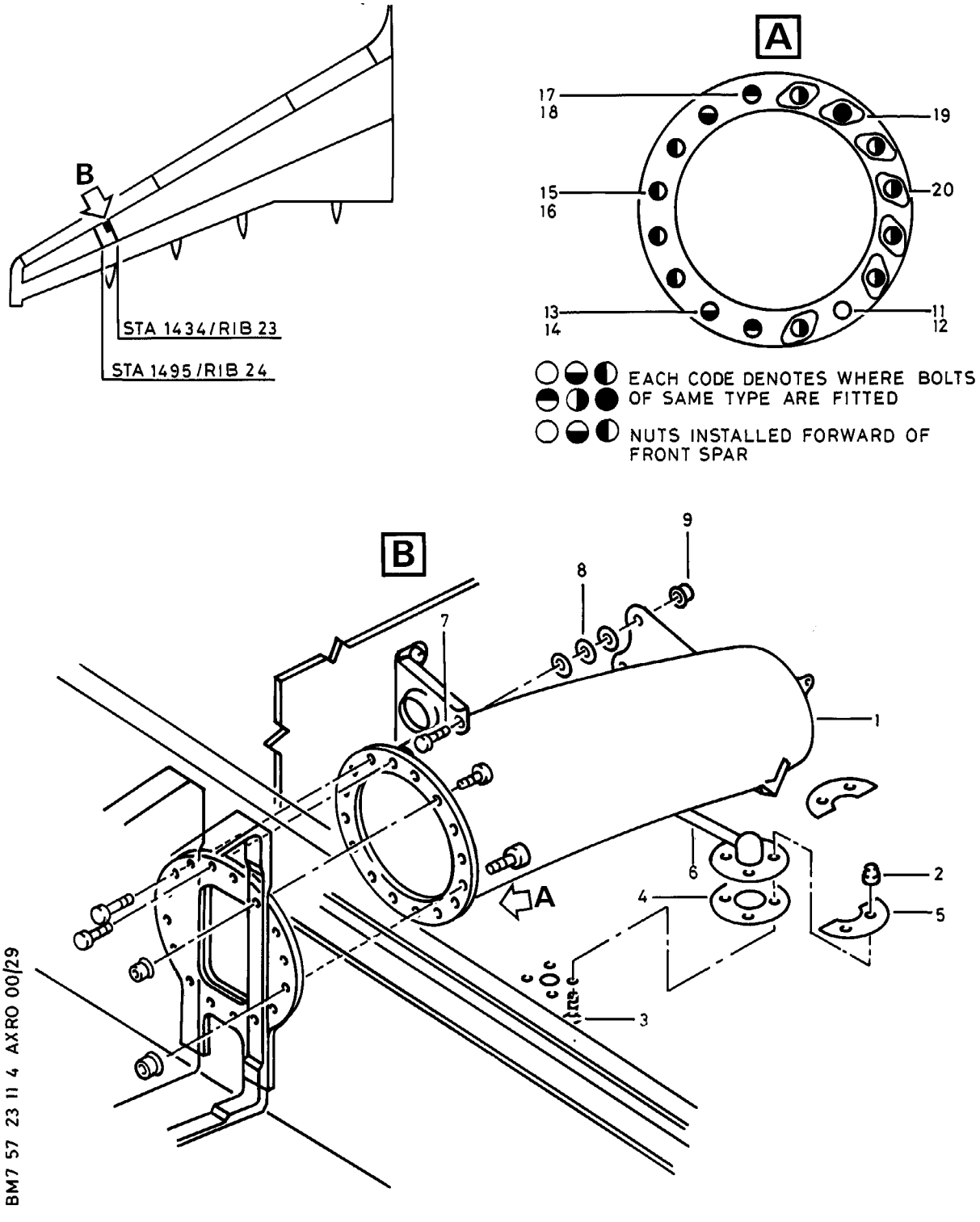


Track Can 8 - Removal/Installation
Figure 413

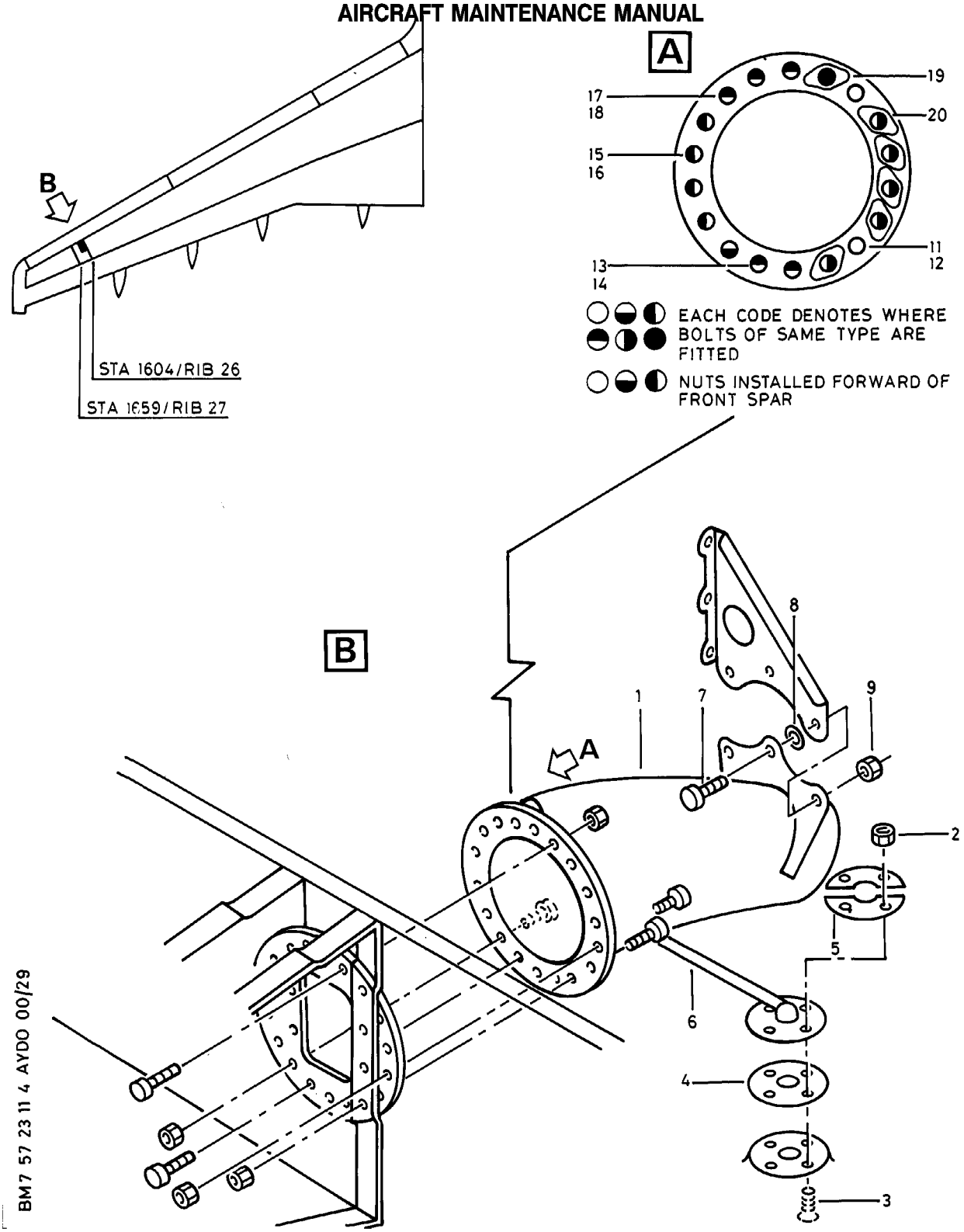


Track Can 8 - Removal/Installation
Figure 414

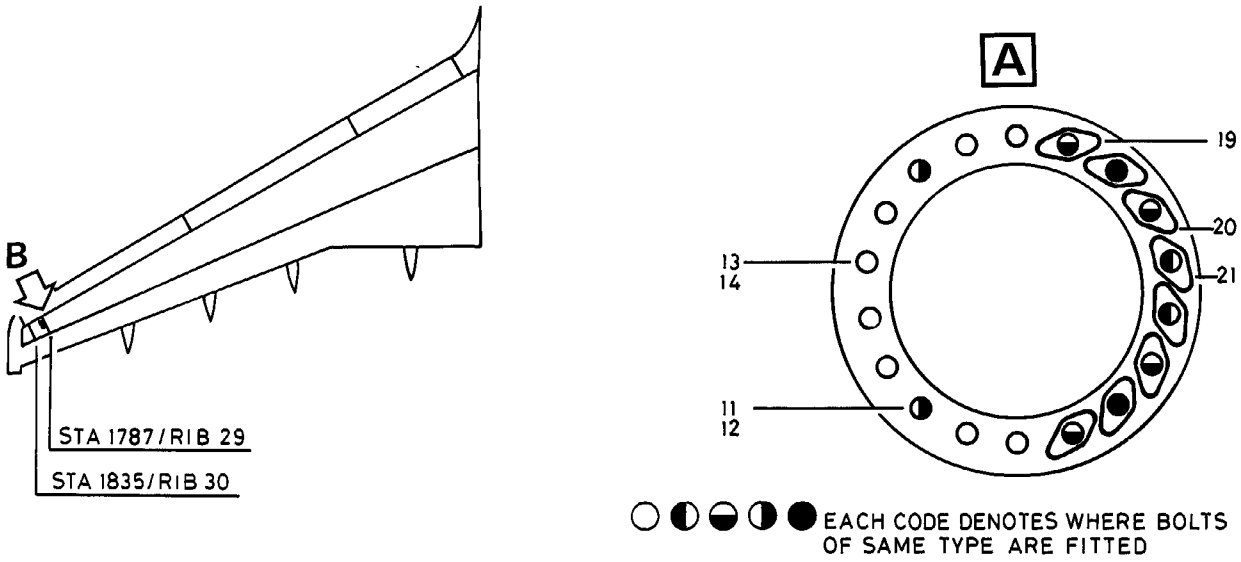
R

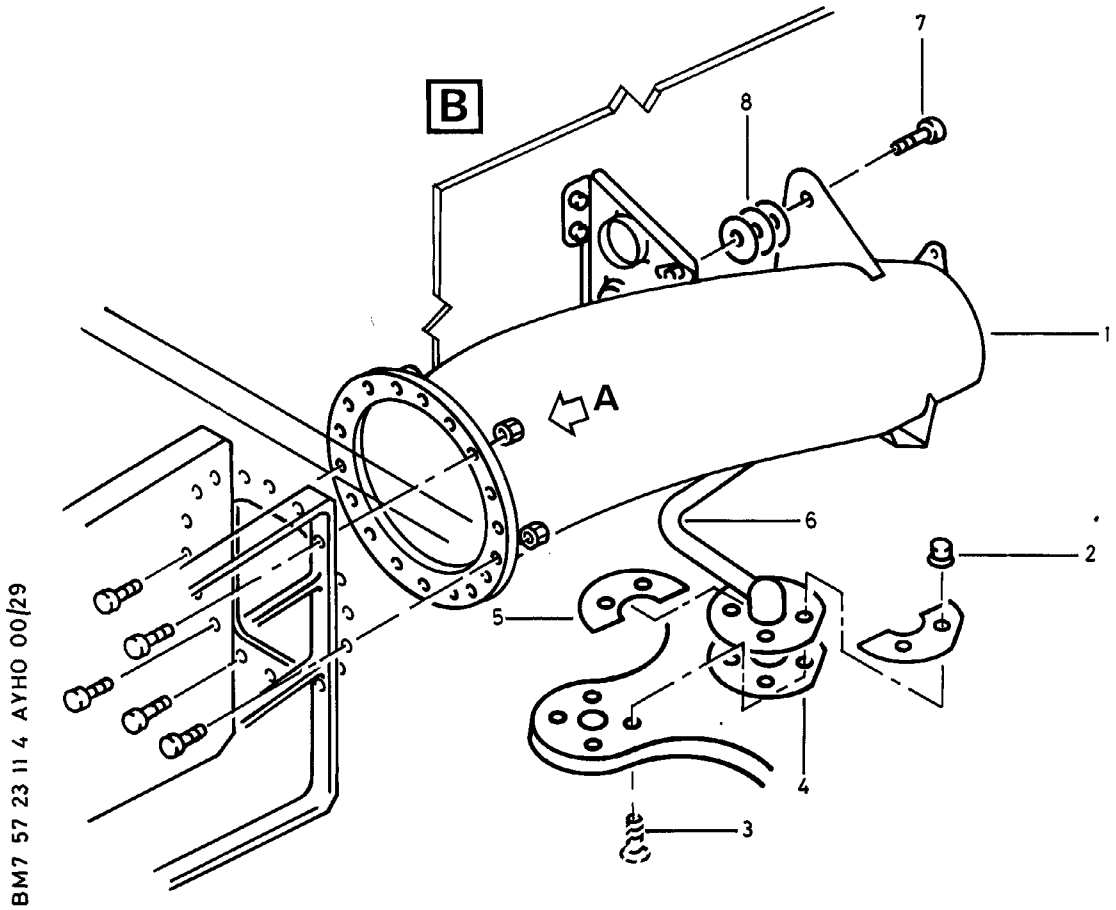


Track Can 9 - Removal/Installation
Figure 415

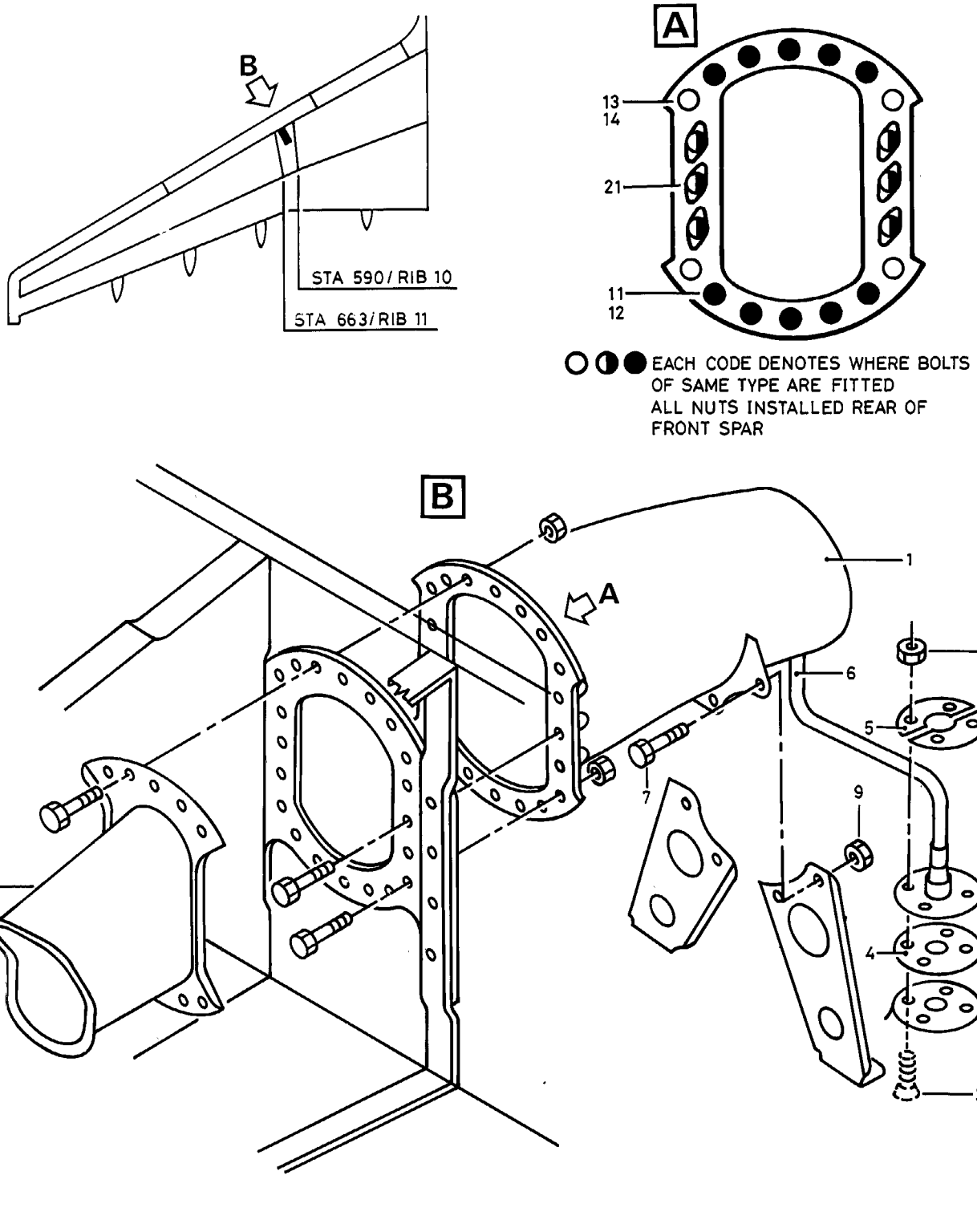


Track Can 10 - Removal/Installation
Figure 416

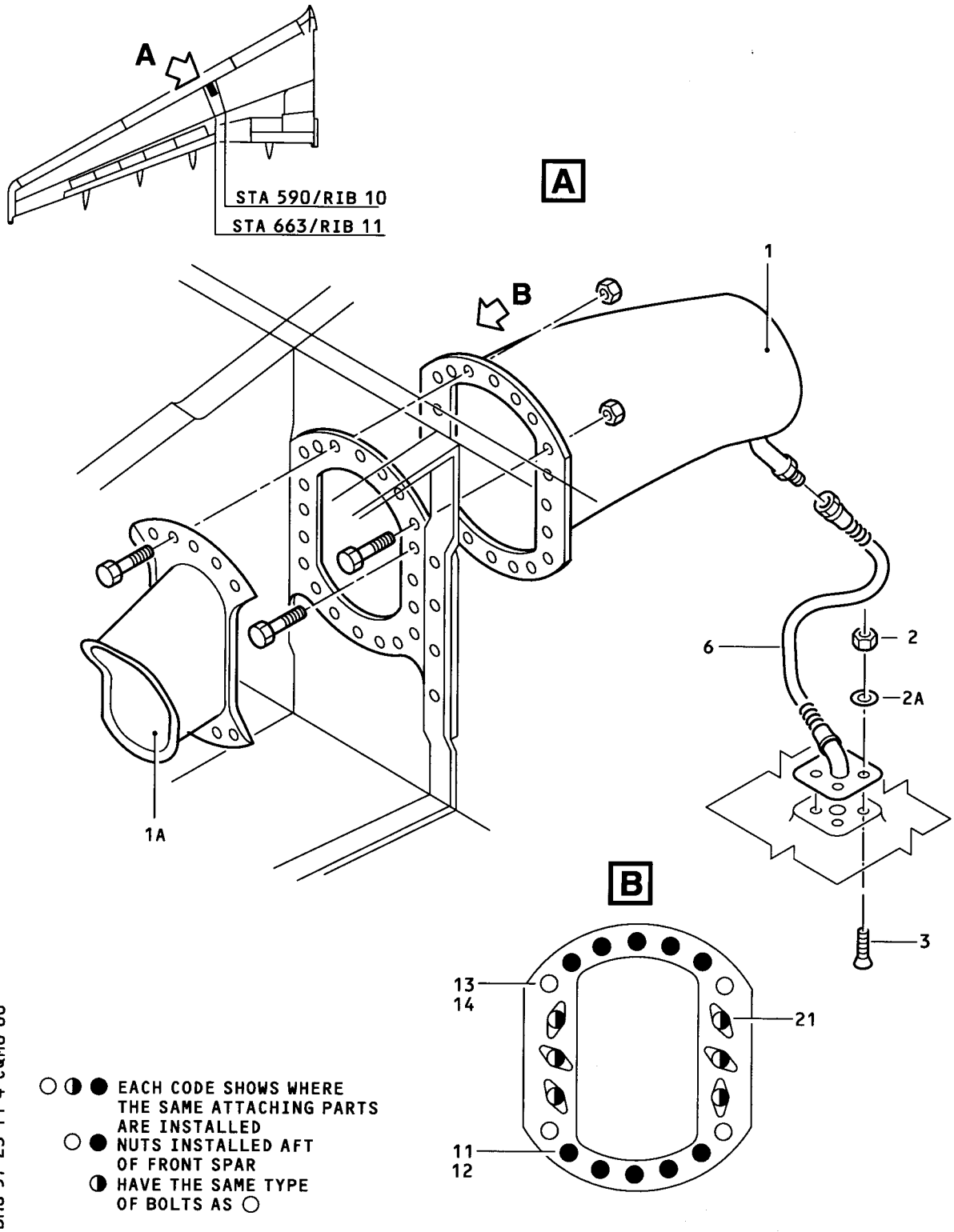




Track Can 11 - Removal/Installation
Figure 417

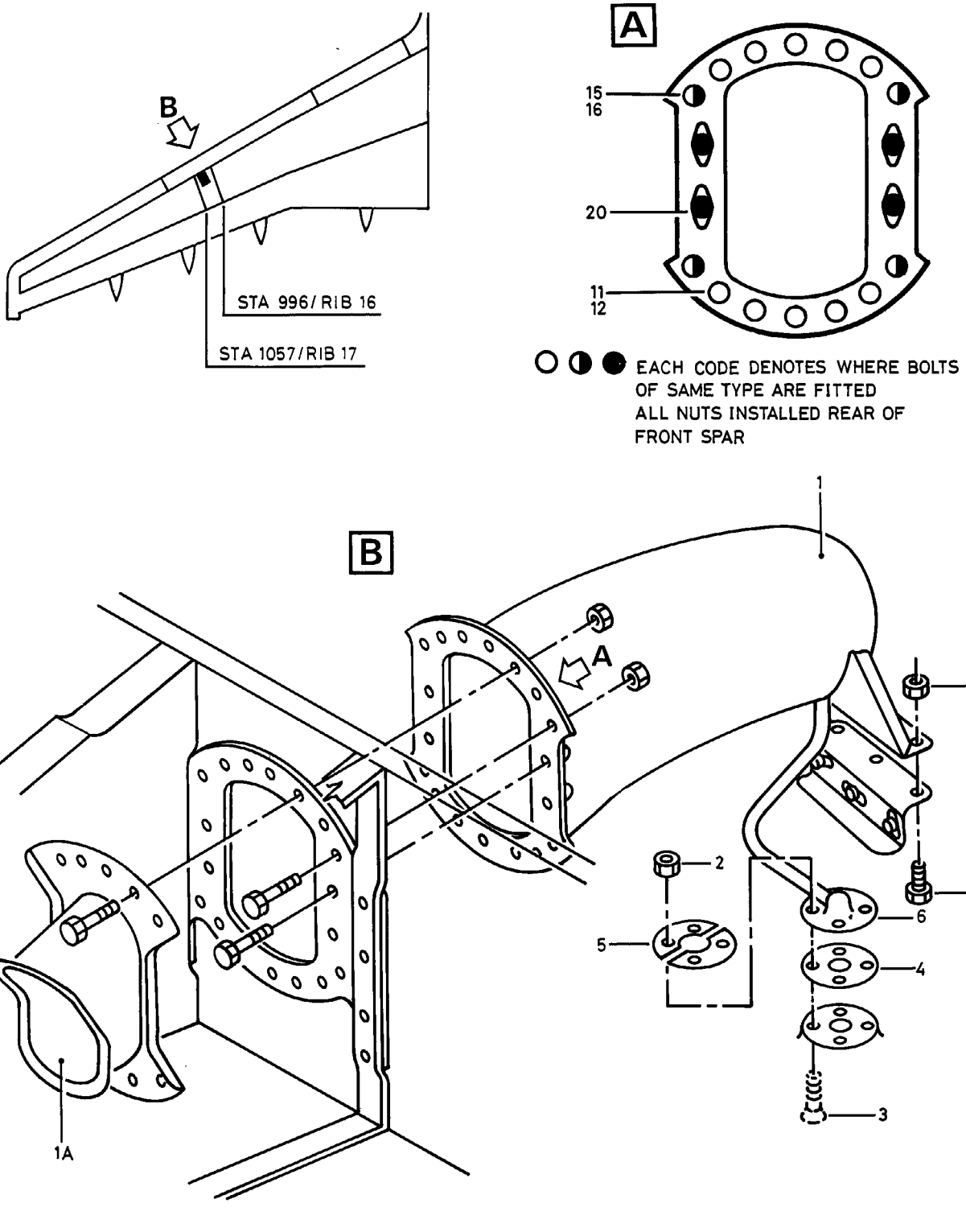


Jack Can 3 - Removal/Installation
Figure 418

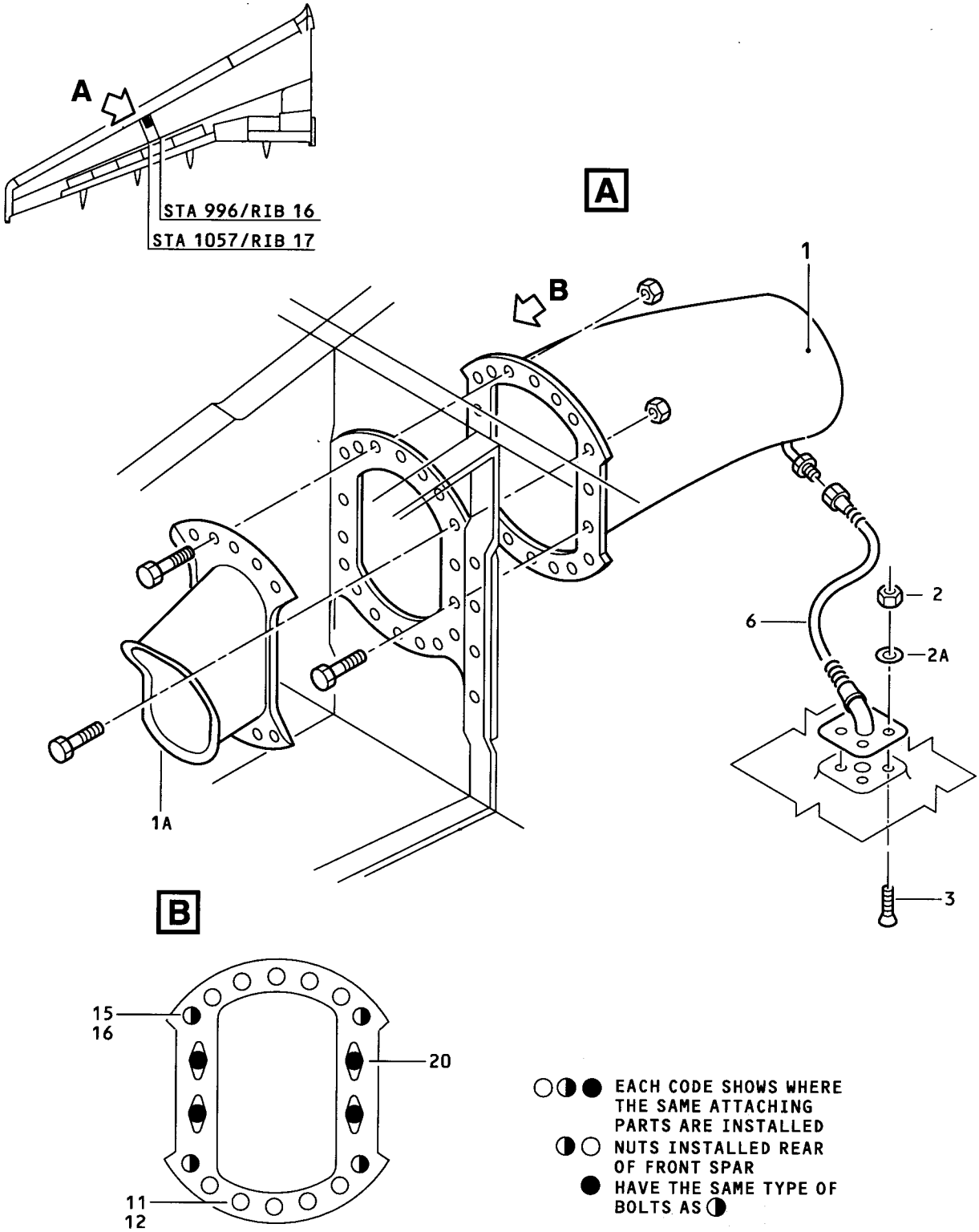


Jack Can 3 - Removal/Installation
Figure 419

R

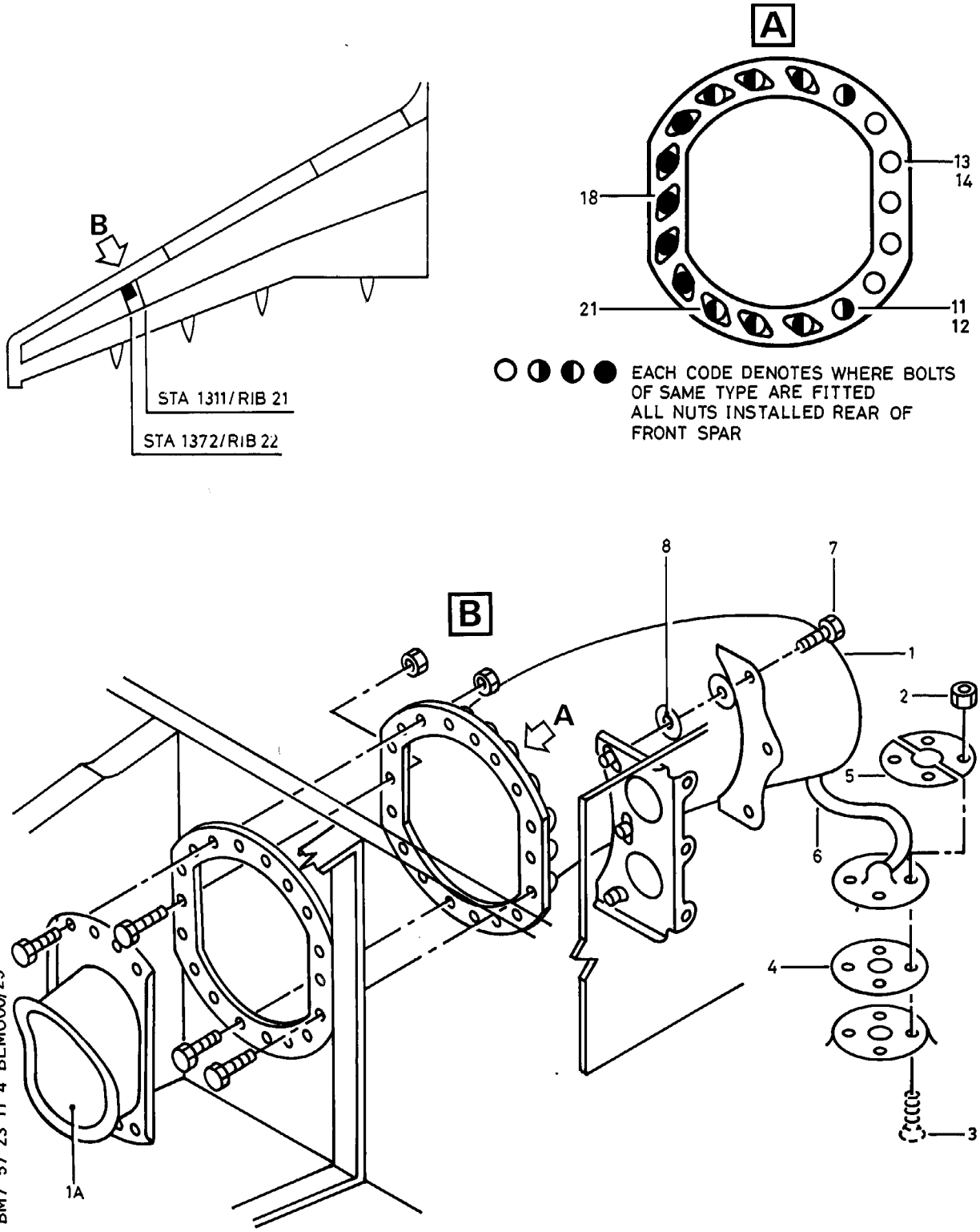


Jack Can 4 - Removal/Installation
Figure 420

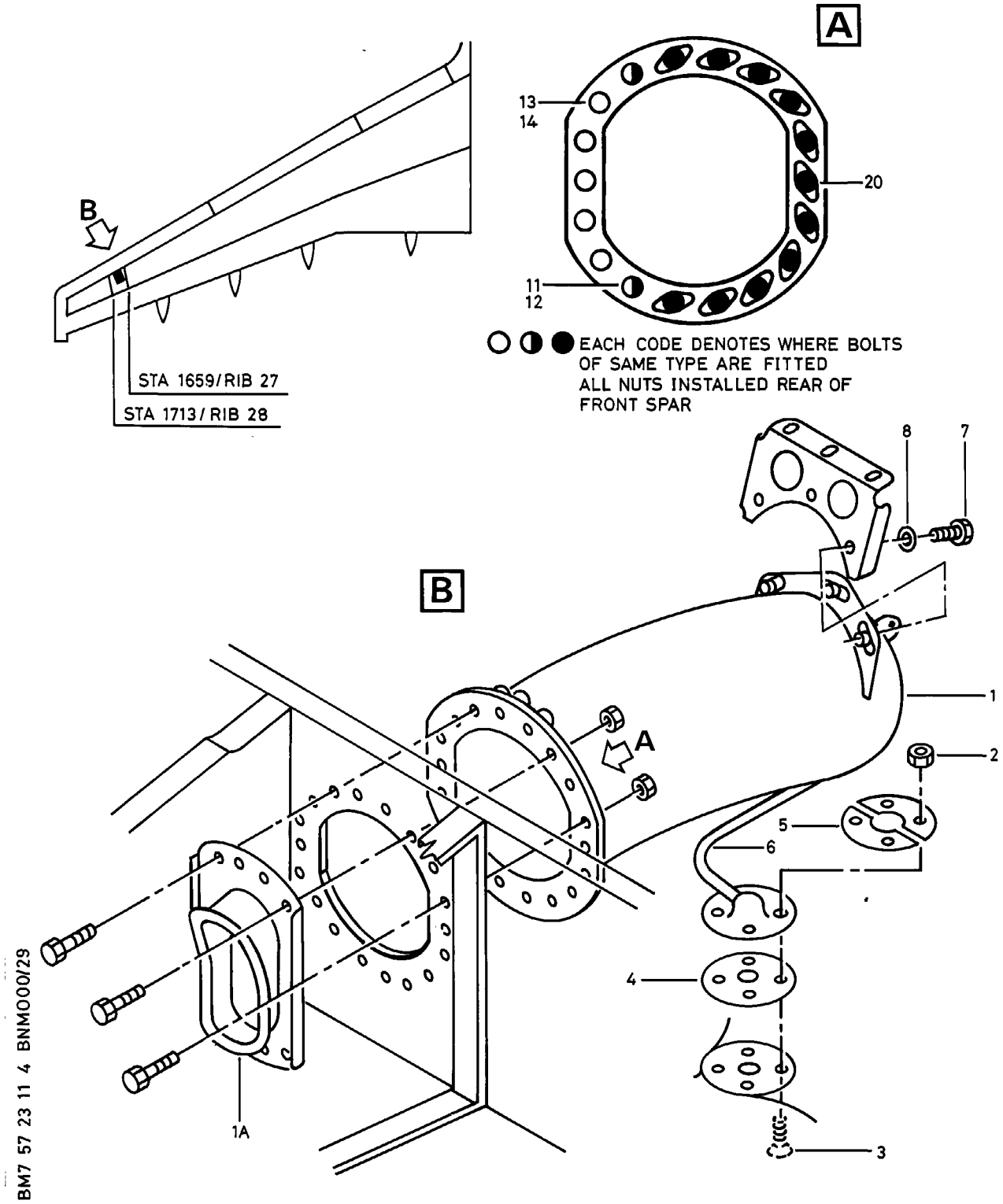


Jack Can 4 - Removal/Installation
Figure 421

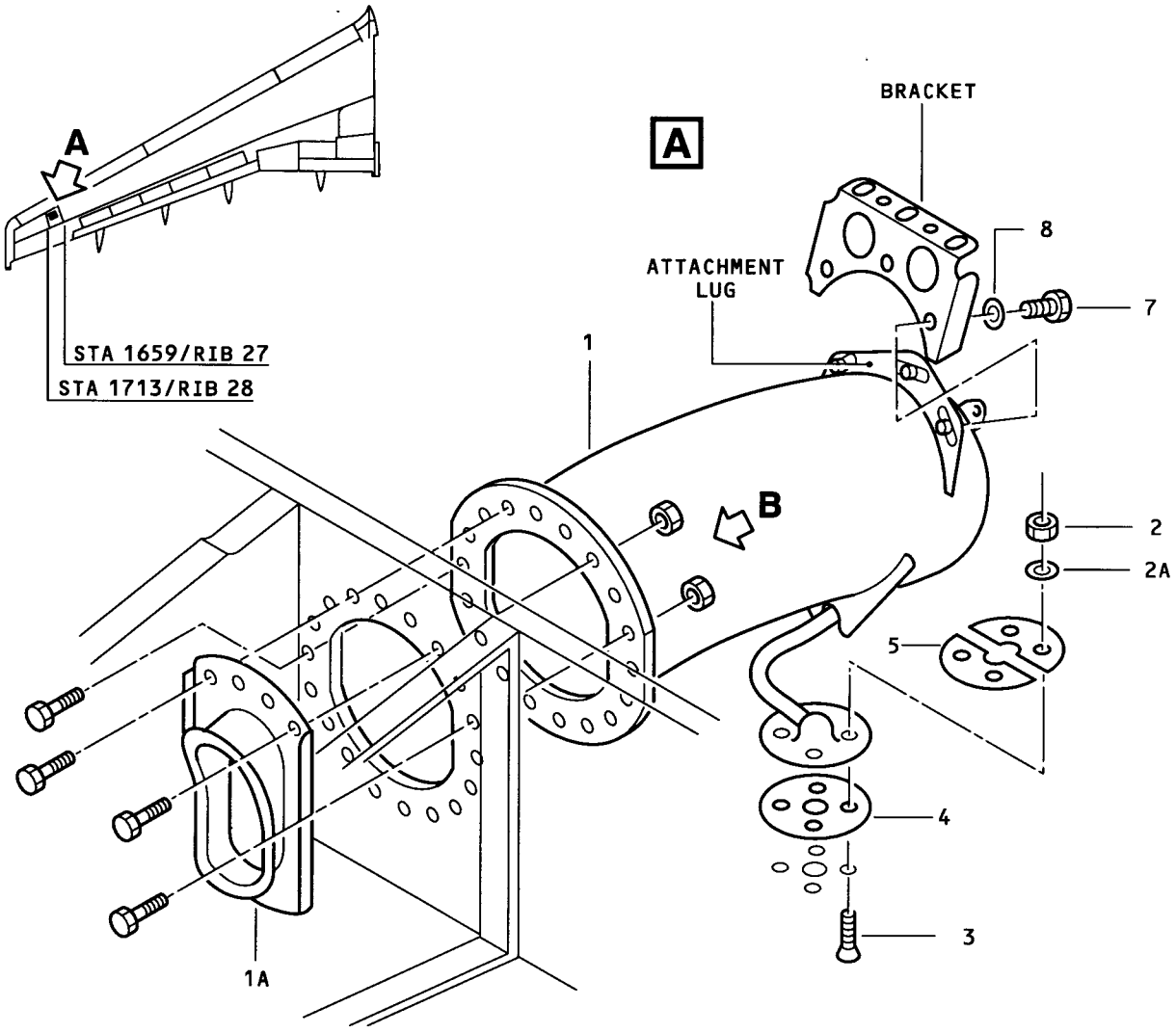
R

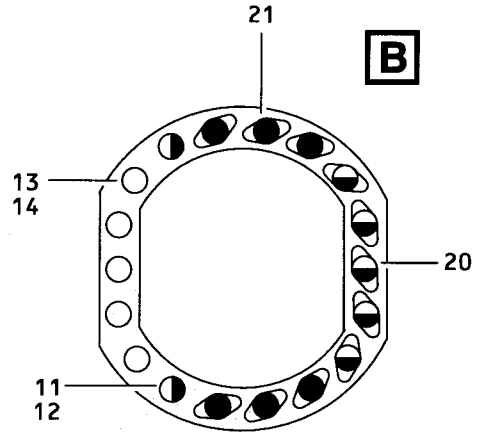


Jack Can 5 - Removal/Installation
Figure 422



Jack Can 6 - Removal/Installation
Figure 423





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◒○◑● EACH CODE SHOWS WHERE THE SAME ATTACHING PARTS ARE INSTALLED

◑○ NUTS INSTALLED REAR OF FRONT SPAR

◑ HAVE THE SAME TYPE OF BOLTS AS ●

◒ HAVE THE SAME TYPE OF BOLTS AS ○

Jack Can 6 - Removal/Installation
Figure 424

R

R (2)Fully extend the slats (Ref. 27-80-00, P. Block 301).
R (3)Open, safety and tag these circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
133VU	FLT CTL/KRUGER	45CV	333/T61
133VU	FLT CTL/SFCC/NORM SUPPLY/SLATS/SYS 1	7CV	333/T63
133VU	FLT CTL/SFCC/NORM SUPPLY/SLATS/SYS 2	8CV	333/T64
133VU	FLT CTL/SLATS/26VAC/SYS 2	4CV	335/R64
133VU	FLT CTL/SLATS/26VAC/SYS 1	3CV	335/R65
133VU	FLT CTL/SFCC/LAND RECOVERY/SUPPLY/SLATS/ SYS 1	9CV	335/R66
133VU	FLT CTL/SLATS/WTB 2	14CV	336/Q64
133VU	FLT CTL/SLATS/WTB 1	13CV	336/Q65

R (4)Put the access platform in position.
R (5)Put the warning notice, prohibiting operation of the slats, on the center
R pedestal in the flight compartment.
R (6)Open the related access panels (Ref. 06-41-57, P. Block 1) and manhole
R covers (Ref. 28-11-22, P. Block 401 and/or 28-11-24, P. Block 401):

- Track 1/Screw-jack 1	512(612)BB,CB,DB	540(640)AB
- Track 2	512(612)EB,FB	540(640)BB
- Track 3/Screw-jack 2	512(612)HB,GB,JB	540(640)CB
- Track 4	523(623)BB,CB	540(640)DB
- Screw-jack 3	523(623)CB,DB	540(640)EB
- Track 5	523(623)EB,FB	540(640)GB
- Track 6	523(623)GB	550(650)AB
- Screw-jack 4	523(623)LB	550(650)CB
- Track 7	523(623)MB	550(650)EB
- Track 8	524(624)DB	550(650)HB
- Screw-jack 5	524(624)EB	550(650)JB
- Track 9	524(624)FB	550(650)KB
- Track 10	524(624)GB,HB	550(650)MB
- Screw-jack 6	524(624)HB,JB,KB	550(650)PB
- Track 11	524(624)KB	560(660)BB.

B. Removal
R (1)Remove the relevant pipes from the fuel system (Ref. 28-00-00,
R P. Block 401):
R - Refuel/defuel and vent pipes, between ribs 2 and 3 at track 1/
R screw-jack 1 canister
R - Refuel/defuel and vent-pipes, between ribs 4 and 5 at track 2
R canister
R - Refuel/defuel and vent-pipes, between ribs 6 and 7 at track 3/
R screw-jack 2 canister
R - Refuel/defuel and vent pipes, between ribs 9 and 10 at track 4
R canister
R - Refuel/defuel and vent pipes, between ribs 10 and 11 at screw-jack 3
R canister
R - Vent pipes, between ribs 12 and 13 at track 5 canister
R - Fuel feed and vent pipes, between ribs 14 and 15 at track 6
R canister

R - Vent pipes, between ribs 16 and 17 at screw-jack 4 canister
R - Vent pipe, between ribs 17 and 18 at track 7 canister.

R NOTE : The center-tank vent pipes are only installed in the left-hand
R wing.

R (2)Remove the related slat track or screw-jack from the canister:
R - for tracks 1 thru 3, refer to 27-80-13, P. Block 401
R - for tracks 4 thru 11, refer to 27-80-14, P. Block 401
R - for screw-jacks 1 thru 4, refer to 27-84-22, P. Block 401
R - for screw-jacks 5 and 6, refer to 27-84-23, P. Block 401.
R (3)Screw-jack canisters 3 and 4:
R (a)Remove the anti-icing ducts adjacent to the canister (Ref. 30-00-00,
R P. Block 401).
R (4)Track Canisters 2 and 4 thru 7:
R For canisters (1) with a rigid drain pipe (6):
R (Ref. Fig. 404, 406, 408)
(Ref. Fig. 410, 412).
R For canisters (1) with a flexible drain pipe (6):
R (Ref. Fig. 405, 407, 409)
R (Ref. Fig. 411).

R CAUTION : BE CAREFUL NOT TO CAUSE DAMAGE TO THE ANTI-ICING DUCTS WHEN
R YOU REMOVE THE HEAT SHIELDS (10) FROM THE FRONT SPAR. IF YOU
R HAVE NOT REMOVED THE ANTI-ICING DUCTS, DAMAGE CAN OCCUR.

R (a)Remove the bolts (or nuts and bolts where installed) and remove the
R heat shields (10) installed adjacent to the canister.
R (5)Disconnect the canister drain:
R For canisters (1) with a rigid drain pipe (6):
R (Ref. Fig. 401, 402, 404)
R (Ref. Fig. 406, 408, 410)
R (Ref. Fig. 412, 413, 415)
R (Ref. Fig. 416, 417, 418)
R (Ref. Fig. 420, 422, 423)
R (Ref. Fig. 424).

R (a)Remove the nuts (2) and the bolts (3).
R (b)Release the drain pipe (6) from the surface of the tank. Where
R applicable, collect the packing piece (4) and the plate halves (5).

R For canisters (1) with a flexible drain pipe (6):
R (Ref. Fig. 403, 405, 407)
R (Ref. Fig. 409, 411, 414)
R (Ref. Fig. 419, 421).
R (a)Remove the nuts (2), the bolts (3) and the washers (2A) from the flange
R of the drain pipe (6).
R (b)Release the drain pipe (6) from the surface of the tank.

R NOTE : Do not separate the flexible drain pipe (6) from the canister
R (1) at this stage.

(6)Where applicable, disconnect the canister attachment lug:
(a)Remove the nuts (9) (where installed), the washers (8) (where installed) and the bolts (7).
(b)Release the attachment lug from the attachment bracket.
(7)Remove the canister (1).

NOTE : When you remove the bolts, you must record the type and position of each bolt for the subsequent installation. You must remove all the bolts from the front spar so that you can seal them correctly during the installation.

(a)Remove the nuts (11), (13), (15) and/or (17), the washers (where installed) and the bolts (12), (14), (16), (18), (19), (20) and/or (21). For track canisters (1) with a flexible drain pipe (6), remove the bolts (16) together with the anchor plate.
(b)Remove the canister (1) and the drain pipe (6).
(c)If you removed the screw-jack canister 3, 4, 5 or 6, remove the screw-jack guard (1A).

C. Preparation of Replacement Component
(1)Make a template from the removed canister flange.
(2)Use the template to drill/ream holes of 6.426 to 6.477 mm (0.253 to 0.255 in) diameter in the replacment canister flange. Radius the holes that will be under the bolt heads to 0.51 to 0.76 mm (0.02 to 0.03 in).
(3)If the replacement canister has an anchor plate, position the anchor plate on the canister flange and back drill the holes:
- center hole to between 6.35 to 6.40 mm (0.250 to 0.252 in)
- rivet holes to between 2.46 to 2.57 mm (0.097 to 0.101 in).

NOTE : For further information about the installation of the anchor plates see the Technical Specification Sheet which is supplied with the replacement canister.

(4)Make a template from the removed canister attachment lug.
(5)Use the template to drill/ream the holes to the nominal diameter +0.05 -0.0 mm (+0.002 -0.000 in) in the replacement canister-attachment lug.

**ON A/C 001-003,

(6)Canisters with a flexible drain pipe.
(a)If it is necessary to install a replacement drain pipe:
1 Make a template from the flange of the flexible drain pipe previously removed.
2 Use the template to drill/ream holes of between 6.43 to 6.48 mm (0.253 - 0.255 in.) in the flange of the flexible drain pipe.

R **ON A/C 004-200,

(6)Canisters with a flexible drain pipe.
(a)If it is necessary to install a replacement drain pipe:

R 1 Make a template from the flange of the flexible drain pipe
R previously removed.
R 2 Use the template to drill/ream holes of between 7.22 to 7.27 mm
R (0.284 - 0.286 in.) in the flange of the flexible drain pipe.

R **ON A/C ALL

R (b)Prepare the flexible drain pipe for installation:
R 1 Slave bolt the canister to the front spar.
R 2 Apply sealant (Material No. 09-005) to the canister drain connection
R and the drain pipe union.
R 3 Connect the drain pipe union to the canister and align the drain
R hole in the drain pipe with the drain hole in the lower wing skin.
R 4 Tighten the drain pipe union with your fingers making sure that the
R drain pipe does not kink.
R 5 Remove the canister with the drain pipe attached.
R 6 TORQUE the drain pipe union (Ref. 20-23-12, P. Block 1), making
R sure that the drain pipe does not rotate. Fasten with lockwire
R (Material No. 19-010).

R WARNING : CLEANING AGENT (MATERIAL No. 11-004) IS DANGEROUS.

R (7)Use cleaning agent (Material No. 11-004), clean lint-free cloths and, if
R applicable, a non-metallic scraper to clean all mating surfaces,
R attachment and attachment parts and all applicable nuts, bolts and
R washers.

R D. Installation

R WARNING : CLEANING AGENT (MATERIAL No. 11-004) IS DANGEROUS.

R CAUTION : YOU MUST COMPLY WITH THE FUEL TANK CLEAN AND SEAL PROCEDURES TO
R MAKE SURE THAT THE FUEL TANK SEALING IS COMPLETE, AND TO CONFIRM
R THE INTEGRITY OF THE TANK.

R (1)Use cleaning agent (Material No. 11-004) and a clean lint-free cloth to
R make sure that all mating surfaces are clean before you apply sealant.
R (2)Apply a thin coat of sealant (Material No. 09-005) to canister flange(s)
R and as applicable to front and rear interfaces on front spar,
R re-inforcing plate(s), anchor bolt plate(s) and screw-jack guard(s).
R (3)Apply sealant (Material No. 09-005) to the shank and under the heads of
R all the bolts, except for those assembled to self-sealing nuts.
R (4)Install the canister (1).

R For canisters (1) with a rigid drain pipe (6):
R (Ref. Fig. 401, 402, 404)
R (Ref. Fig. 406, 408, 410)
R (Ref. Fig. 412, 413, 415)
R (Ref. Fig. 416, 417, 418)
R (Ref. Fig. 420, 422, 423)
R (Ref. Fig. 424).

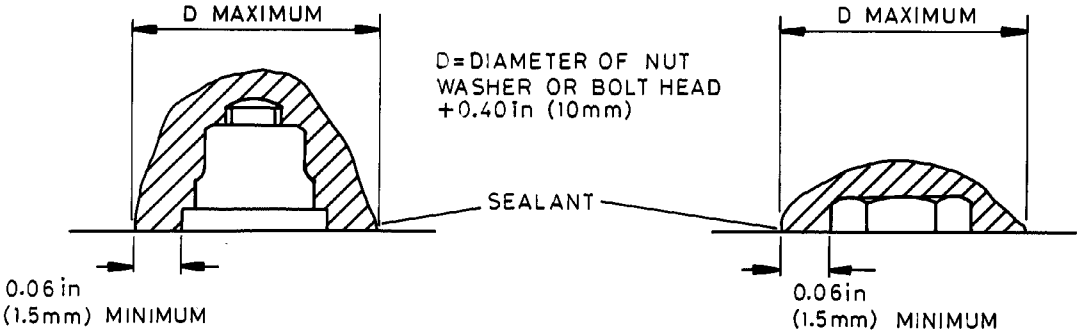
R For canisters (1) with a flexible drain pipe (6):
R (Ref. Fig. 403, 405, 407)
R (Ref. Fig. 409, 411, 414)
R (Ref. Fig. 419, 421).

R (a)Put the canister (1) in position on the rear face of the front spar. Make sure the holes in the canister (1) are correctly aligned with the holes in the spar.
R (b)If you install the screw-jack canister 3, 4, 5 or 6, put the screw-jack guard (1A) in position on the front face of the front spar. Make sure the holes in the screw-jack guard are correctly aligned with the holes in the spar.
R (c)Loosely install the bolts (12), (14), (16), (18), (19), (20) and/or (21), the washers (where installed) and the nuts (11), (13), (15) and/or (17).

R NOTE : Make sure that all the bolts are installed in the positions recorded during the removal.

R (5)Where applicable, connect the canister attachment lug:
R (a)Loosely install the nuts (9) (where installed), the washers (8) (where installed) and the bolts (7).
R (6)Connect the canister drain:
R (a)For canisters (1) with a rigid drain pipe (6):
R 1 Make sure that the packing piece (4) fits correctly to the fuel tank interface, before applying sealant. If necessary fettle the packing piece to suit.
R 2 Apply the sealant (Material No. 09-005) to:
R - the mating faces between the drain pipe (6) and the fuel tank
R - the packing piece (4) and the plate halves (5) (where installed).
R - below the heads of the bolts (3).
R 3 Put the packing piece (4) and the plate halves (5) (where installed) in position at the drain pipe (6) to fuel tank interface.
R 4 Loosely install the bolts (3), the washers (2A) (where installed) and the nuts (2).
R (b)For canisters (1) with a flexible drain pipe (6):
R 1 Apply the sealant (Material No. 09-005):
R - to the mating faces between the drain pipe (6) and the fuel tank
R - below the heads of the bolts (3).
R 2 Attach the drain pipe (6) to the fuel tank with the bolts (3), the washers (2A) and the nuts (2). Tighten the nuts (2).
R (7)Tighten the canister (1):
R (a)Fully tighten the nuts and bolts in the sequence that follows:
1 Canister flange, tighten opposite nuts and bolts in a clockwise
R sequence. TORQUE to 6.78-7.91 m.daN (60-70 lbf in.).
R 2 Drain pipe flange. TORQUE the bolts to 6.78-7.91 m.daN (60-70 lbf in.).
R 3 Canister attachment lug. TORQUE the bolts to 3.39-3.95 m.daN (30-35 lbf in.).
R (b)At all positions, the unwanted sealant will come out of the joint. Make this sealant smooth to form a continuous fillet around the joint.

INDIVIDUAL APPLICATIONS OVER NUTS AND BOLT HEADS



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Fuel Canister - Bolt and Nut Sealing
Figure 425

R (8)Seal the canister (1).
R (a)At the flange of the canister (1):
R 1 Apply the sealant (Material No 09-017) over the bolt threads, the nuts and the washers (or bolt head if the head is inside the tank).
R 2 Use the applicator and collapsible aluminium tube to make the sealant into a cap with the dimensions as shown (Ref. Fig. 425). Make sure that the cap of sealant contains no air bubbles.
R 3 At any position where the applicator cannot be used, apply sealant with a brush. The thickness of the brushed coat must be sufficient to make a good seal. This is important at the thread/nut junction. The same sealant dimensions are applicable.
R (b)At the drain pipe flange:

R **WARNING : CLEANING AGENT (MATERIAL No. 11-004) IS DANGEROUS.**

R 1 Use the cleaning agent (Material No 11-004) to clean the bolt tails and the self-sealing nuts.
R 2 Apply the sealant (Material No 09-007) to the bolt tails and the self-sealing nuts. The same sealant dimensions are applicable.
R (c)At the attachment lug/bracket (where applicable):
R 1 Use a brush to apply the sealant (Material No 09-017) to all the bolt heads, tails and nuts.
R (d)Use the cleaning agent (Material No 11-004) to clean all the bolt tails that extend forward of the front spar. Use a brush to apply the paint (Material No 16-006) to the bolt tails.
R (9)Install the related slat track or screw-jack in the canister (1):
R - for tracks 1 thru 3, refer to 27-80-13, P. Block 401
R - for tracks 4 thru 11, refer to 27-80-14, P. Block 401
R - for screw-jacks 1 thru 4, refer to 27-84-22, P. Block 401
R - for screw-jacks 5 and 6, refer to 27-84-23, P. Block 401.

R NOTE : While installing the track, but prior to connecting the track to the slat, push the track into the canister to make sure that the track does not hit the canister.

R (10)Install the relevant pipes in the fuel system (Ref. 28-00-00, P. Block 401):
R - Refuel/defuel and vent pipes, between ribs 2 and 3, at track 1/ screw-jack 1 canister
R - Refuel/defuel and vent pipes, between ribs 4 and 5, at track 2 canister
R - Refuel/defuel and vent pipes, between ribs 6 and 7, at track 3/ screw-jack 2 canister
R - Refuel/defuel and vent pipes, between ribs 9 and 10, at track 4 canister
R - Refuel/defuel and vent pipes, between ribs 10 and 11, at screw-jack 3 canister
R - Vent pipes, between ribs 12 and 13, at track 5 canister
R - Fuel feed and vent pipes, between ribs 14 and 15 at track 6 canister
R - Vent pipes, between ribs 16 and 17 at screw-jack 4 canister
R - Vent pipe, between ribs 17 and 18 at track 7 canister.

R NOTE : The center-tank vent pipes, are only installed in the left-hand
R wing.

E. Test

R (1)Make sure that the work area is clean and clear of tools and all other
R items.
R (2)Install the applicable manhole covers (Ref. 28-11-22, P. Block 401 and
R 28-11-24, P. Block 401).
- Track 1/Screw-jack 1 540(640)AB
- Track 2 540(640)BB
- Track 3/Screw-jack 2 540(640)CB
- Track 4 540(640)DB
- Screw-jack 3 540(640)EB
- Track 5 540(640)GB
- Track 6 550(650)AB
- Screw-jack 4 550(650)CB
- Track 7 550(650)EB
- Track 8 550(650)HB
- Screw-jack 5 550(650)JB
- Track 9 550(650)KB
- Track 10 550(650)MB
- Screw-jack 6 550(650)PB
R - Track 11 560(660)BB.

R (3)Refuel the applicable tank(s) to the high-level sensor cut-off position
R (Ref. 12-11-28, P. Block 301).
R (4)Examine for fuel seepage at the front spar to canister interfaces and at
R the wing skin/front spar and drain flange interfaces.

R F. Close-Up
R (1)Track canisters 2 and 4 thru 7:

R CAUTION : BE CAREFUL NOT TO CAUSE DAMAGE TO THE ANTI-ICING DUCTS WHEN
R YOU INSTALL THE HEAT SHIELDS (10) ON THE FRONT SPAR. IF YOU
R HAVE NOT REMOVED THE ANTI-ICING DUCTS, DAMAGE CAN OCCUR.

R (a)Attach the heat shields (10) on the front spar with the nuts and/or
R bolts.
R (2)Screw-jack canisters 3 and 4
R (a)Install the anti-icing ducts (Ref. 30-00-00, P. Block 401).
R (3)Close the applicable access panels (Ref. 06-41-57, P. Block 1).
R - Track 1/Screw-jack 1 512(612)BB,CB,DB
R - Track 2 512(612)EB,FB
R - Track 3/Screw-jack 2 512(612)HB,GB,JB
R - Track 4 523(623)BB,CB
R - Screw-jack 3 523(623)CB,DB
R - Track 5 523(623)EB,FB
R - Track 6 523(623)GB
R - Screw-jack 4 523(623)LB
R - Track 7 523(623)MB
R - Track 8 524(624)DB

R - Screw-jack 5 524(624)EB
R - Track 9 524(624)FB
R - Track 10 524(624)GB,HB
R - Screw-jack 6 524(624)HB,JB,KB
R - Track 11 524(624)KB.

R (4)Remove the access platform.
R (5)Remove the warning notice.
R (6)Remove the safety clips and tags and close these circuit breakers:
- 3CV, 4CV, 7CV, 8CV, 9CV, 13CV, 14CV and 45CV.

R (7)Fully retract the slats (Ref. 27-80-00, P. Block 301).
R (8)Defuel, if applicable, the fuel tank(s) to the required fuel load (Ref. 28-25-00, P. Block 301).
R (9)Remove all the ground support equipment, the maintenance equipment, the standard and special tools and all other items.

WARNING : CHECK THAT LANDING GEAR GROUND SAFETIES INCLUDING WHEEL CHOCKS ARE IN POSITION.

WARNING : BEFORE APPLYING OR RELIEVING HYDRAULIC SYSTEM PRESSURE, MAKE CERTAIN THAT THE TRAVEL RANGES OF THE CONTROL SURFACES ARE CLEAR.

WARNING : BEFORE PRESSURIZING HYDRAULIC SYSTEMS, CHECK THAT ALL CONTROLS ARE SET TO CORRESPOND WITH THE ACTUAL POSITION OF THE SERVICES THEY OPERATE.

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

1. Equipment and Materials

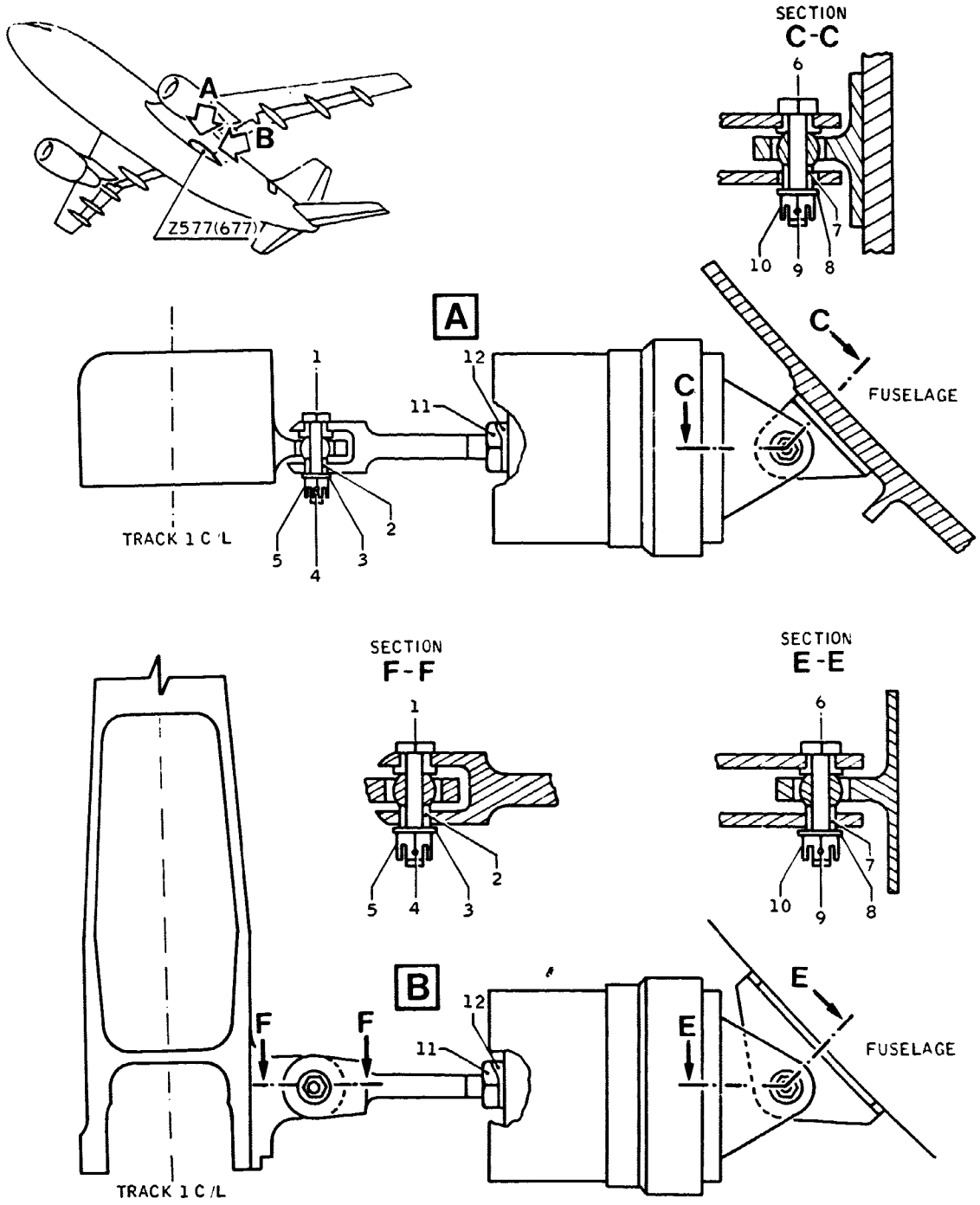
ITEM	DESIGNATION
A.	Access Platform, 2.7 m (9 ft.)
R B. 98A27503003000	Guard - Safety, Flap/Slat Ctl Lever
C.	Torque Wrench, 0.2 m.daN (17.70 lbf.in.) to 0.35 m.daN (30.97 lbf.in.)
D.	Torque Wrench, 1.2 m.daN (106.20 lbf.in.) to 1.4 m.daN (123.9 lbf.in.)
E.	Safety Barriers
F.	Circuit Breaker Safety Clips and Tags
G.	Cotter Pins
H. Material No. 05-002	Special Materials (Ref. 20-31-00)
I. Material No. 06-002	Lubricants (Ref. 20-31-00)
Referenced Procedure - 27-50-00, P. Block 301	Flaps

2. Procedure
(Ref. Fig. 401)

A. Job Set-Up
(1)Position safety barriers.
(2)Retract flaps to "0" position (Ref. 27-50-00, P. Block 301).
(3)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 2	6CV	331/V61
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 1	5CV	332/U61
133VU	FLT CTL/SFCC/LAND RECOVERY/SUPPLY/FLAPS/SYS 1	10CV	335/R67

R (4)Install safety guard PN 98A27503003000 on flap/slat control lever quadrant.



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Damper Assembly
Figure 401

(5)Position access platform.
(6)Open access panels 577AB, 577BB (677AB, 677BB)

B. Removal
(1)Remove and discard cotter pin (4).
(2)Remove castle nut (5), washer (3), bolt (1) and bush (2). Disconnect damper from track 1.
(3)Remove and discard cotter pin (9).
(4)Remove castle nut (10), washer (8), bolt (6) and bush (7).
(5)Remove damper assembly.

C. Installation
(1)Apply lubricant (Material No. 06-002) to thread of bolt (6) and apply anti-corrosion compound (Material No. 05-002) to shank of bolt (6).
(2)Apply anti-corrosion compound (Material No. 05-002) to bush (7).
(3)Position damper assembly on fuselage; install bush (7), bolt (6), washer (8) and castle nut (10). Do not tighten at this stage.
(4)Apply lubricant (Material No. 06-002) to thread of bolt (1) and apply anti-corrosion compound (Material No. 05-002) to shank of bolt (1).
(5)Apply anti-corrosion compound (Material No. 05-002) to bush (2).
(6)Position damper assembly on track 1; if holes are misaligned, slacken nut (11) and adjust length of damper rod until bolt (1) can be fitted without force.
(7)Install bush (2), bolt (1), washer (3), castle nut (5):
(8)TORQUE castle nut (5) to between 0.2 m.daN (17.70 lbf.in.) and 0.35 m.daN (30.97 lbf.in.) and safety with cotter pin (4).
(9)TORQUE castle nut (10) to between 0.2 m.daN (17.70 lbf.in.) and 0.35 m.daN (30.97 lbf.in) and safety with cotter pin (9).
(10)TORQUE nut (11) to between 1.2 m.daN (106.20 lbf.in.) and 1.4 m.daN (123.9 lbf.in.)
(11)Safety tab washer (12).

D. Test
(1)Remove safety clips and tags and close circuit breakers 5CV, 6CV and 10CV.
(2)Remove safety guard from flap/slat control lever quadrant.
(3)Extend flaps to 40° position (Ref. 27-50-00, P. Block 301).
(4)Check that damper assembly functions satisfactory.
(5)Retract flaps to 0° position (Ref. 27-50-00, P. Block 301).
(6)Check that damper assembly functions satisfactorily.

E. Close-Up
(1)Close access panels 577AB, 577BB, (677AB, 677BB).
(2)Remove access platform.
(3)Remove safety barriers.

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS. CHECK THAT LANDING GEAR GROUND SAFETIES INCLUDING WHEEL CHOCKS ARE IN POSITION.

1. General Visual Check

A. Reason for the Job
(1)General visual check of damper assembly and attachments.

B. Equipment and Materials

	ITEM	DESIGNATION
	(1)	Access Platform, 2.7 m (9 ft.)
R	(2)98A27503003000	Guard - Safety, Flap/Slat Ctl Lever
	(3)	Safety Barriers
	(4)	Circuit Breaker Safety Clips and Tags

Referenced Procedure
- 27-50-00, P. Block 301 Flaps

C. Procedure
(1)Job Set-Up
WARNING : BEFORE OPERATING FLAPS, MAKE CERTAIN THAT TRAVEL RANGE OF SURFACES IS CLEAR.
(a)Position safety barriers.
(b)Extend flaps to 20° position (Ref. 27-50-00, P. Block 301).
(c)Open safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 2	6CV	331/V61
133VU	FLT CTL/SFCC/NORM SUPPLY/FLAPS/SYS 1	5CV	332/U61
133VU	FLT CTL/SFCC/LAND RECOVERY/SUPPLY/ FLAPS/SYS 1	10CV	335/R67

R (d)Install safety guard PN 98A27503003000 on flap/slat control lever quadrant.
(e)Position access platform.
(2)Inspection/Check
(a)Inspect damper assembly for satisfactory condition (no corrosion, cracks or other damage).
(b)At attachment points check that:
- all nuts and bolts are properly tightened and safetied.
- all nuts and bolts are in satisfactory condition (no

corrosion).
(c)Check that attachment points are in satisfactory condition (no corrosion, cracks or other damage).

(3)Close-up
(a)Remove safety clips and tags and close circuit breakers 5CV, 6CV and 10CV.
(b)Remove safety guard from flap/slat control lever quadrant.
WARNING : BEFORE OPERATING FLAPS, MAKE CERTAIN THAT TRAVEL RANGE OF SURFACES IS CLEAR.
(c)Retract flaps (Ref. 27-50-00, P. Block 301).
(d)Remove access platform.
(e)Remove safety barriers.
(f)Make certain work area is clean and clear of tools and miscellaneous items of equipment.

WING TIP - DESCRIPTION AND OPERATION

1. General

(Ref. Fig. 001)

The removeable wing tip assembly comprises two main sections joined by rivets. The forward section contains the forward navigation and strobe lights. The aft section contains a strobe light in a fairing, and carries an integral aerodynamic tip fence on the outer edge.

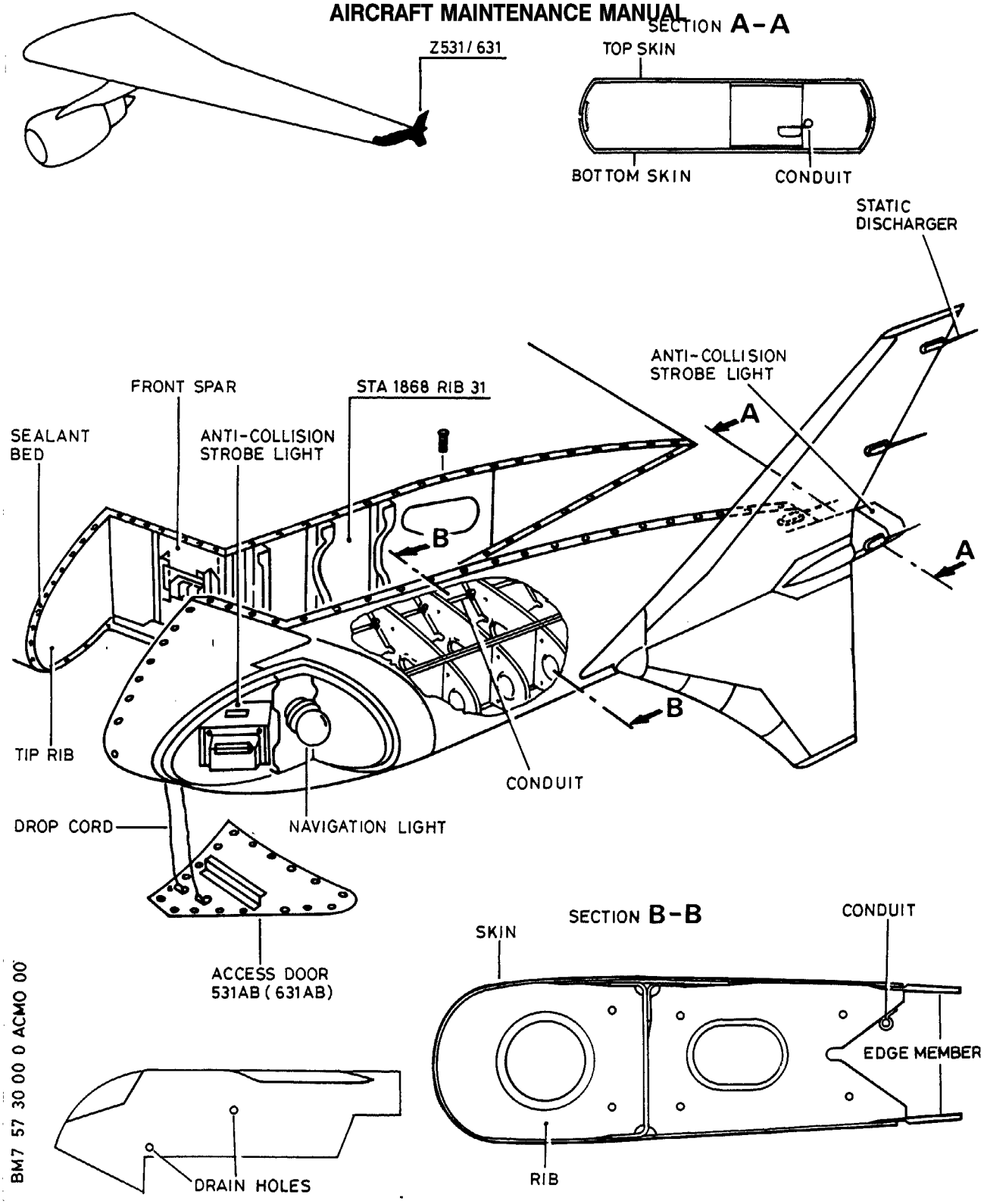
The wing tip structure consists of machined and extruded edge members and beams, and sheet metal ribs and skins. All are of aluminum alloy, and are rivetted together.

The wing tip is attached to the outer wing at STA1868(RIB 31) by bolts through landings on the leading edge tip rib, the front spar STA1868 (RIB 31), and the trailing edge shroud. The wing tip is also located by a spigot at the rear spar, and secured by a bolt through bushes in shear fittings on the wing tip and leading edge STA1868(RIB 31) at front spar. A bed of Thickol on the leading edge rib landing, and a thin coat on the remaining landings, provide a seal around the wing tip edges.

The forward navigation and strobe lights are mounted in a recess in the wing tip forward section. The aft strobe light is mounted in a fairing on the aft section trailing end. The lights are covered by sealed, transparent polycarbonate windows. An access door for electrical connections is provided in the forward section bottom surface. Electrical cables are routed in a conduit through the wing tip structure to the aft strobe light.

Static dischargers are fitted in retainers on the outer profile and trailing edge of the aft section, and the trailing edges of the wing tip fence.

The swept-back aerofoil shaped fence reduces wing tip vortex drag, and thereby improves the aircraft performance, without adversely affecting in-flight handling.



Wing Tip
Figure 001

R

WING TIP - REMOVAL/INSTALLATION

WARNING : **BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.**

LANDING GEAR - MAKE CERTAIN GROUND SAFETIES AND CHOCKS ARE IN POSITION.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 4.7 m (15.5 ft)
B. Material No. 09-003	Sealants (Ref. 20-31-00)
C.	Circuit Breaker Safety Clips and tags
Referenced Procedures	
- 23-61-11, P. Block 401	Static Discharger
- 33-41-00, P. Block 501	Navigation Lights
- 33-41-31, P. Block 401	Aft Navigation and Strobe Lights
- 33-41-32, P. Block 401	Forward Navigation Light
- 33-41-33, P. Block 401	Light-Forward Flashing Navigation
- 51-20-00, P. Block 1	Processes

2. Procedure

(Ref. Fig. 401)

A. Job Set-up

(1)Open safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
132VU	LIGHTING/EXTERIOR LT/NAV/2	1 LA	322/N75
132VU	LIGHTING/EXTERIOR LT/NAV/1	11 LA	322/N78
132VU	LIGHTING/EXTERIOR LT/STROBE	11 LV	322/N79

(2)Position access platform at wing tip Zone 531(631).

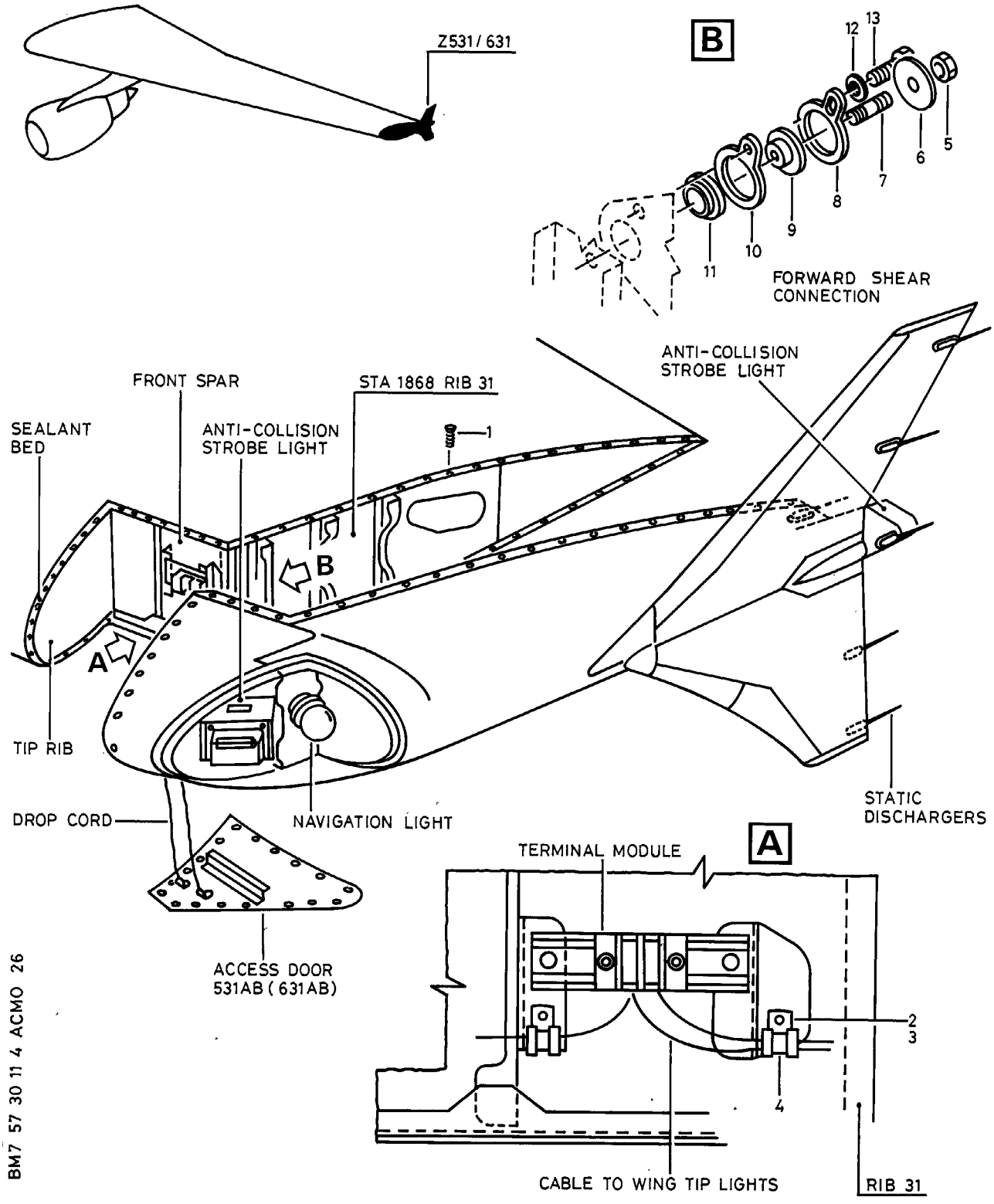
(3)Open and lower access door 531(631)AB to the extent of drop cord. Disconnect key ring from drop cord terminal and remove door.

B. Removal

NOTE : If the existing wing tip is to be removed for replacement perform steps (1) thru (8), otherwise perform steps (1) thru (3) only.

(1)Disconnect electrical connections from terminal module 5001 VT (5000 VT) (Zone 531 or 631). Remove electrical cable clip (4) from adjacent structure by removing bolt (2) and spacer (3). Protect and suitably stow the disconnected cables.

(2)Remove forward shear connection through lower access door 531 (631)AB : cut and remove lockwire from nut (5), remove nut and washer (6). Remove bolt (13) and washer (12) securing retaining plates.



Wing Tip - Installation
Figure 401

Remove retaining plates (8) and (10). Remove stud (7) and bushes (9) and (11).

(3)Support wing tip; remove bolts (1), withdraw wing tip (weight approximately 41 Kg (90 lb)) and remove to a suitable trestle.
(a)If existing wing tip is to be installed, retain bolts and note positions for eventual installation in same locations.
(b)If replacement wing tip is to be installed, discard existing bolts.

(4)Remove static dischargers from retainers and suitably stow. (Ref. 23-61-11, P. Block 401).
(5)Remove forward navigation light (Ref. 33-41-32, P. Block 401).
(6)Remove forward strobe light (Ref. 33-41-33, P. Block 401).
(7)Remove aft navigation and strobe light (Ref. 33-41-31, P. Block 401).
(8)Connect key ring to access door 531(631)AB drop cord terminal and close door.

C. Preparation of Replacement Component
(1)Clean and inspect the interfaces of the replacement wing tip.
(2)Clean and inspect the interface and visible areas of the outer wing landings, removing all traces of old sealant.

NOTE: Do not disturb sealant bed on wing leading-edge tip rib.

(3)Open and lower access door 531(631)AB to the extent of drop cord. Disconnect key ring from drop cord terminal and remove door.
(4)Install static dischargers in retainers (Ref. 23-61-11, P. Block 401).
(5)Suitably stow electrical cables clear of interfaces.
(6)Install forward navigation light (Ref. 33-41-32, P. Block 401).
(7)Install forward strobe light (Ref. 33-41-33, P. Block 401).
(8)Install aft navigation and strobe light (Ref. 33-41-31, P. Block 401).

D. Installation
(1)Inspect the sealant bed on the wing leading-edge tip rib. Where necessary, restore by applying sealant (Material No.09-003) (Ref. 51-20-00, P. Block 1) to a nominal thickness of 0.05 in (1.270 mm). Apply a thin coating of sealant (Material No.09-003) to the remaining outer wing landings.
(2)Locate the wing tip in position on the structure interface aligning the spigot on the wing tip with the fitting on the landing structure.
(a)If existing wing tip is being installed, install and evenly tighten bolts (1) in their original locations.
(b)If replacement wing tip is being installed, select correct length bolts from kit provided, install and evenly tighten.

NOTE : Correct length bolts should protrude two threads through nuts.

(3)Install forward shear connection through lower access door 531 (631)AB : install bolt (7) into anchor nut, insert bush (9) into bush (11) and install assembled bushes onto stud (7) and locate in attachment channel. Rotate bush (9) to take up any play. Install

retaining plates (8), (10) and washer (6). Install bolt (13) and washer (12). Tighten bolt (13) to secure retaining plates. Install and tighten nut (5). Safety with lockwire.

(4)Check that the wing tip to wing skin joint gaps, the into and out of wind steps and the trailing edge mismatch are within limits.

R **ON A/C 001-004, 102-104, 106-200,

(Ref. Fig. 402)

R **ON A/C 105-105,

(Ref. Fig. 403)

**ON A/C 101-101,

(Ref. Fig. 404)

**ON A/C 005-005,

(Ref. Fig. 405)

**ON A/C 006-100,

(Ref. Fig. 406)

**ON A/C ALL

(5)Connect electrical connections to terminal module 5001VT (5000VT) Zone 531(631). Position electrical cable clip (4) and secure to adjacent structure with bolt (2) and spacer (3).

(6)Remove safety clips and tags and close circuit breakers 1LA, 11LA and 11LV.

E. Test

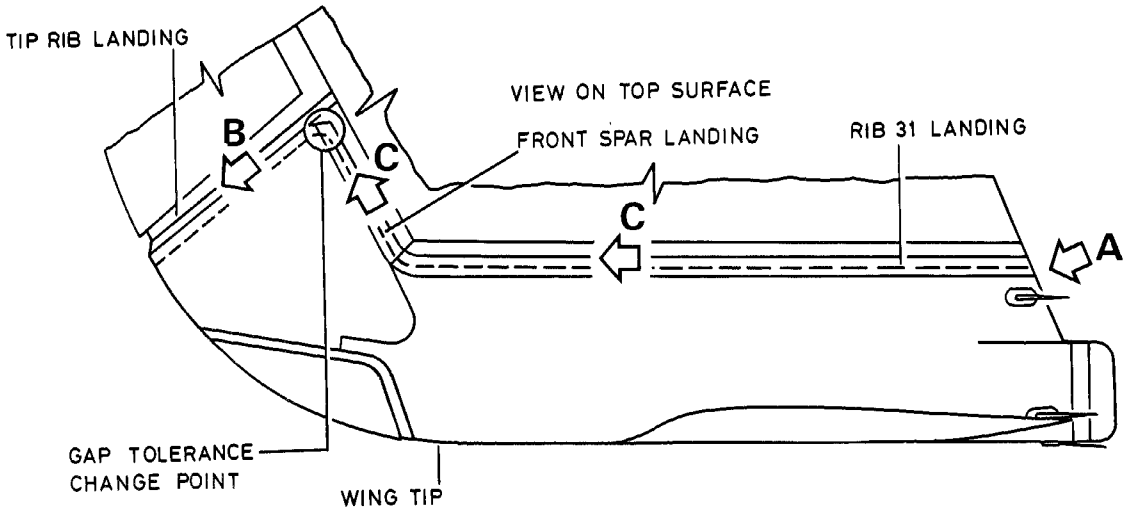
(1)Perform a functional test on navigation and strobe lights (Ref. 33-41-00, P. Block 501).

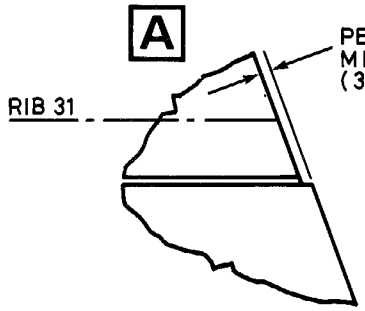
F. Close Up

(1)Ensure that working area is clean and clear of tools and miscellaneous items of equipment.

(2)Connect key ring to access door 531(631) AB drop cord terminal and close door.

(3)Remove access platform.

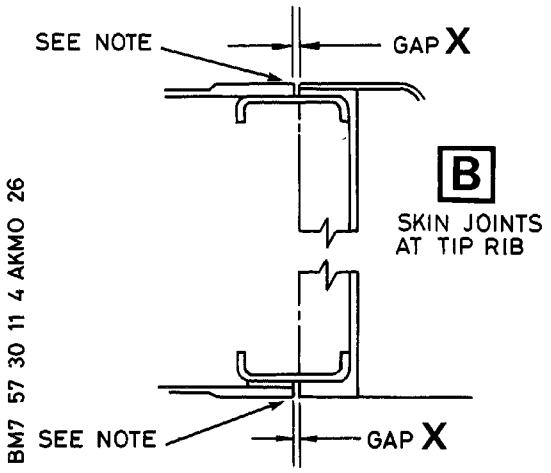


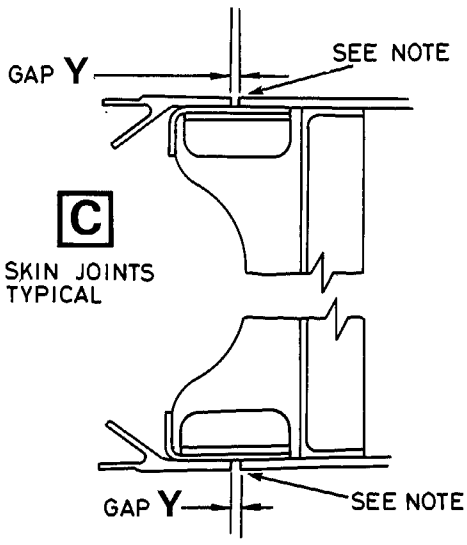


NOTE:
INTO OR OUT OF WIND TOLERANCE 0·05in(1·27mm) AT TIP. LOCALLY IT IS POSSIBLE TO INCREASE THESE FIGURES UP TO 0·10in(2·54mm)

GAP X $0.050^{+0.100\,in}_{-0.040\,in}$ $\left(1.270^{+2.540\,mm}_{-1.020\,mm}\right)$

GAP Y $0.050^{+0.070\,in}_{-0.040\,in}$ $\left(1.270^{+1.780\,mm}_{-1.020\,mm}\right)$





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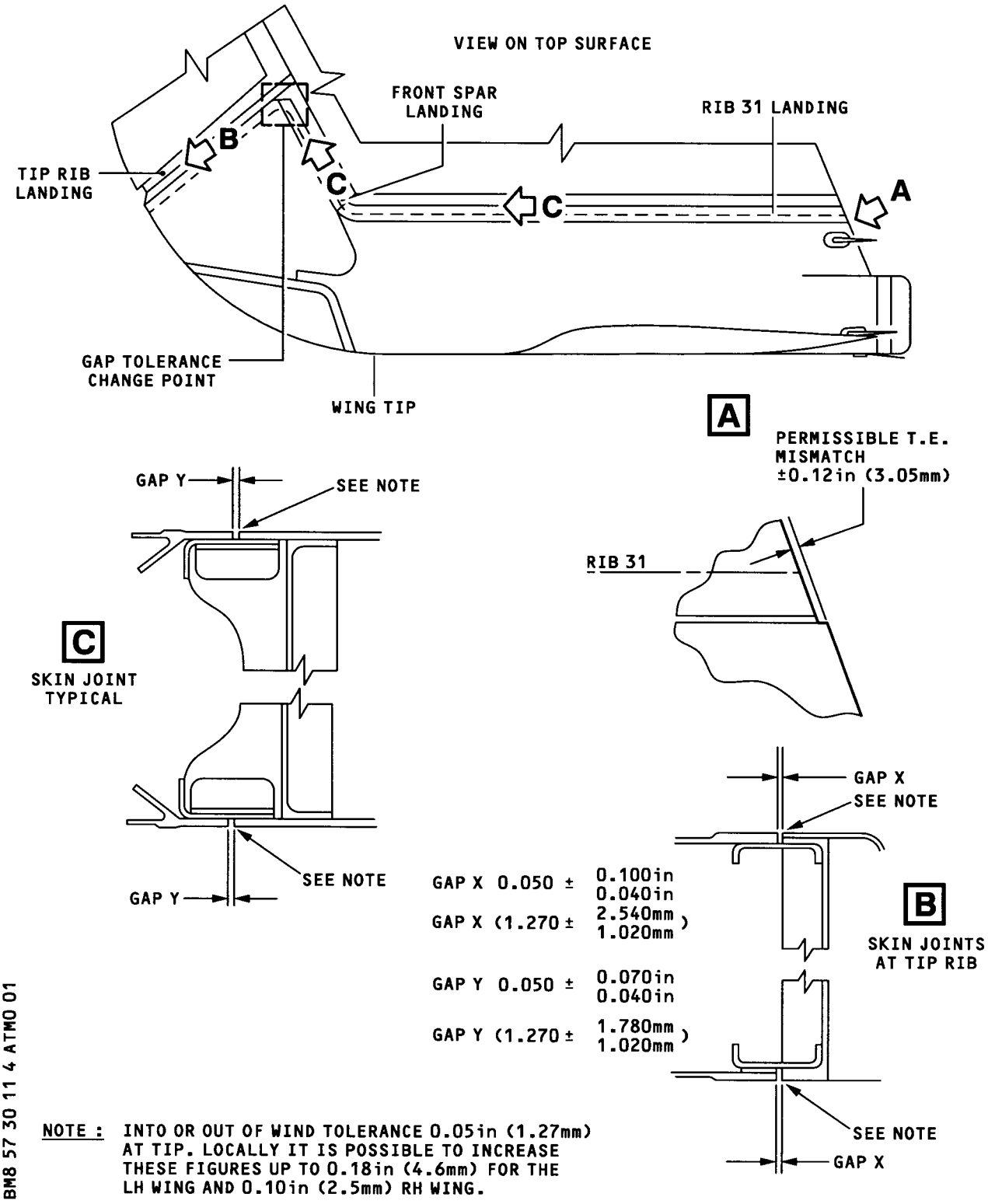
Wing Tip - Installation Details
Figure 402



BM8 57 30 11 4 ATMO 01

NOTE : INTO OR OUT OF WIND TOLERANCE 0.05in (1.27mm) AT TIP. LOCALLY IT IS POSSIBLE TO INCREASE THESE FIGURES UP TO 0.18in (4.6mm) FOR THE LH WING AND 0.10in (2.5mm) RH WING.

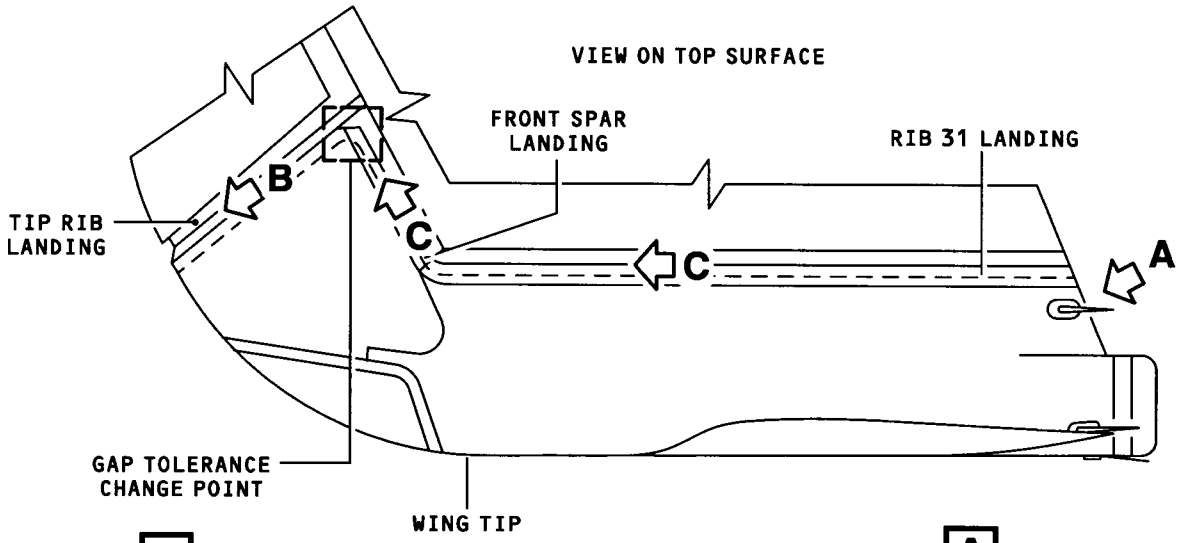
Wing Tip - Installation Details
Figure 403

R

R EFFECTIVITY: 105-105,

PIA

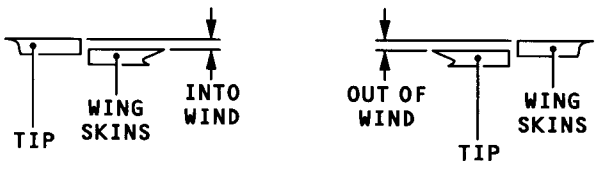
Printed in France



D

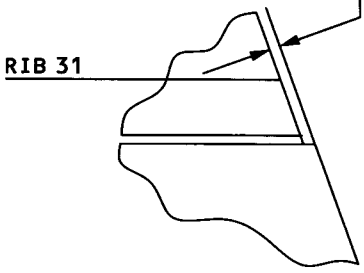
TYPICAL SKIN JOINT

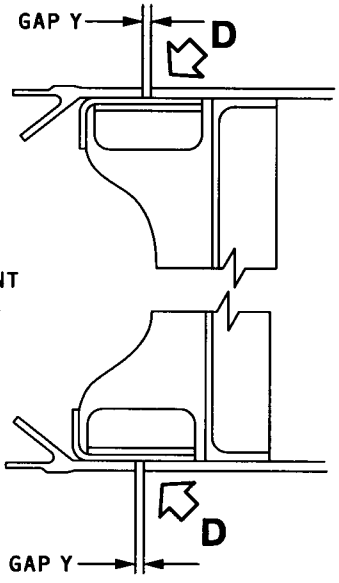
		WING TIP MAX STEP	
		INTO WIND	OUT OF WIND
LH WING	UPPER FACE	0.05in (1.3mm)	0.05in (1.3mm)
	LOWER FACE	0.05in (1.3mm)	0.05in (1.3mm)
RH WING	UPPER FACE	0.05in (1.3mm)	0.05in (1.3mm)
	LOWER FACE	0.11in (2.8mm)	0.05in (1.3mm)



A

PERMISSIBLE T.E. MISMATCH ± 0.12in (3.05mm)





C

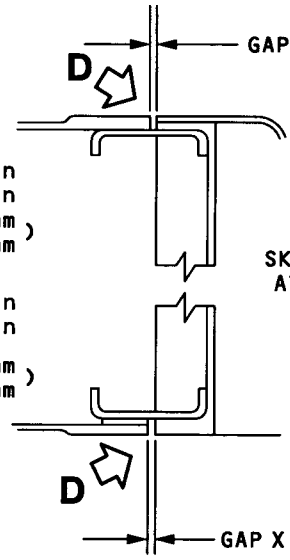
SKIN JOINT TYPICAL

GAP X 0.050 ± 0.100in / 0.040in

GAP X (1.27 ± 2.540mm / 1.020mm)

GAP Y 0.050 ± 0.070in / 0.040in

GAP X (1.270 ± 1.780mm / 1.020mm)

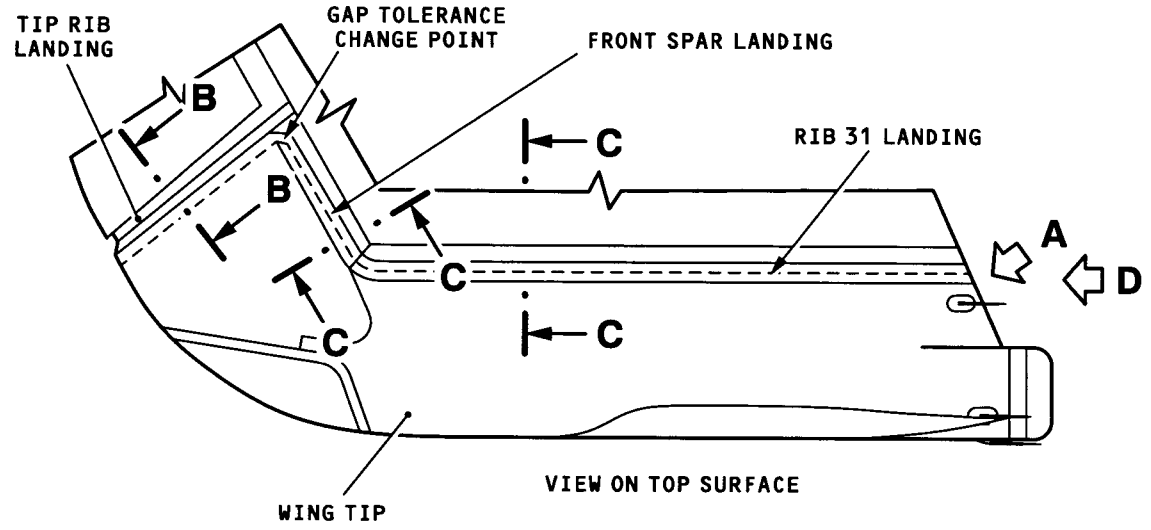


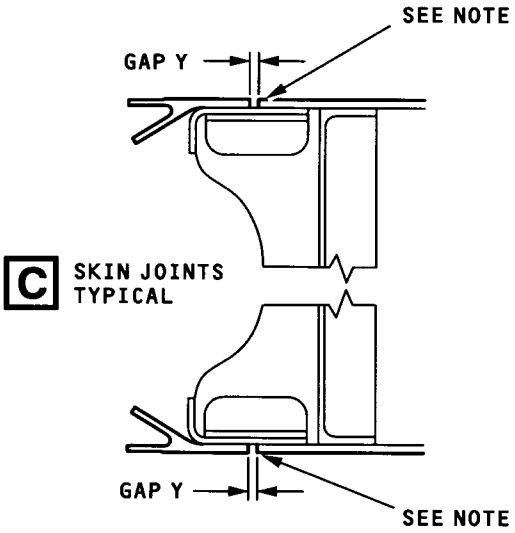
B

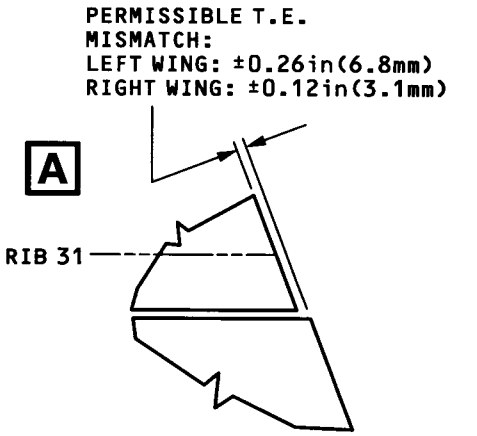
SKIN JOINTS AT TIP RIB

BM8 57 30 11 4 AVMO 01

Wing Tip - Installation Details
Figure 404

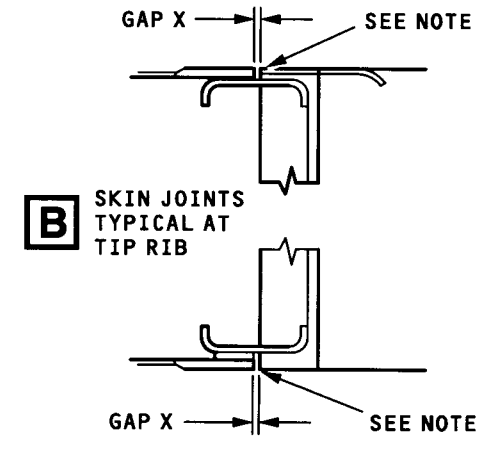






GAP X: $0.050\ ^{+0.100in}_{-0.040in}$ $\left(1.270\ ^{+2.540mm}_{-1.020mm}\right)$

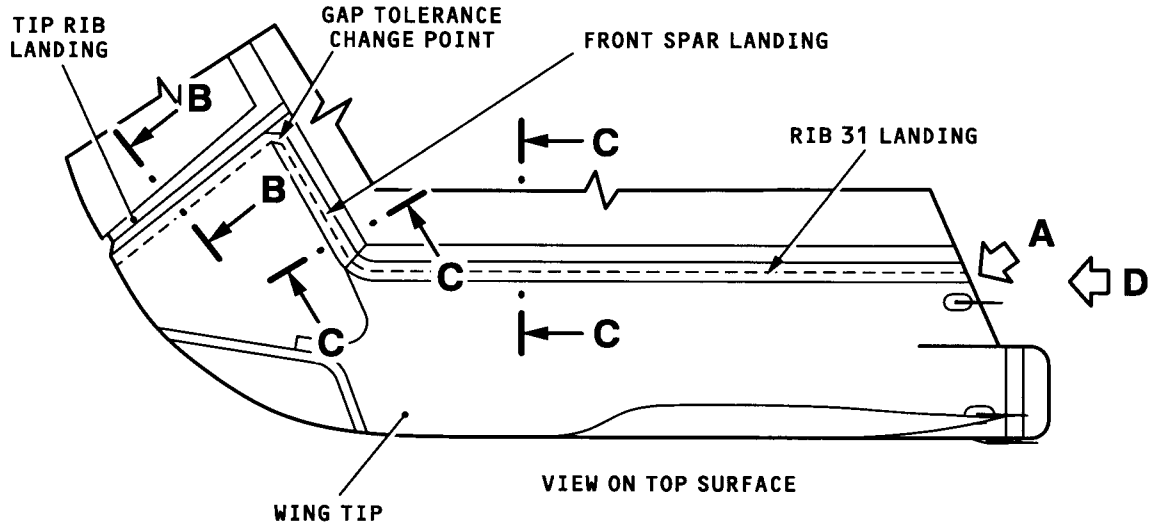
GAP Y: $0.050\ ^{+0.070in}_{-0.040in}$ $\left(1.270\ ^{+1.780mm}_{-1.020mm}\right)$



NOTE:
INTO OR OUT OF WIND TOLERANCE 0.05in(1.27mm) AT TIP. LOCALLY IT IS POSSIBLE TO INCREASE THESE FIGURES UP TO 0.010in(2.54mm)

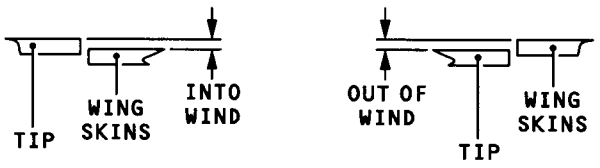
BM8 57 30 11 4 AXMO 00

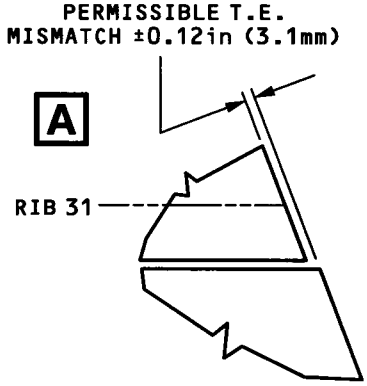
Wing Tip - Installation Details
Figure 405

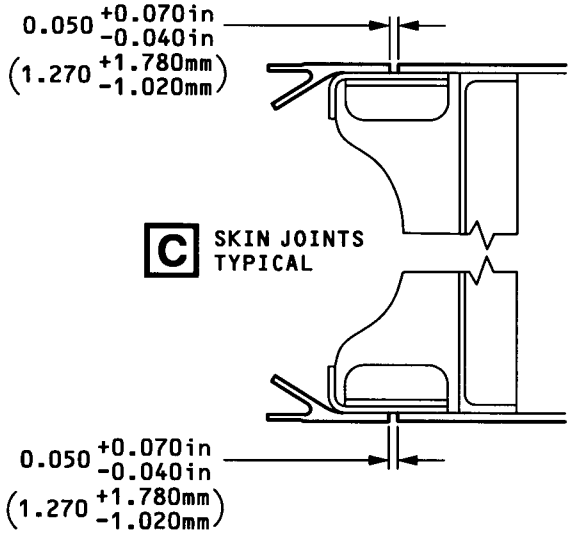


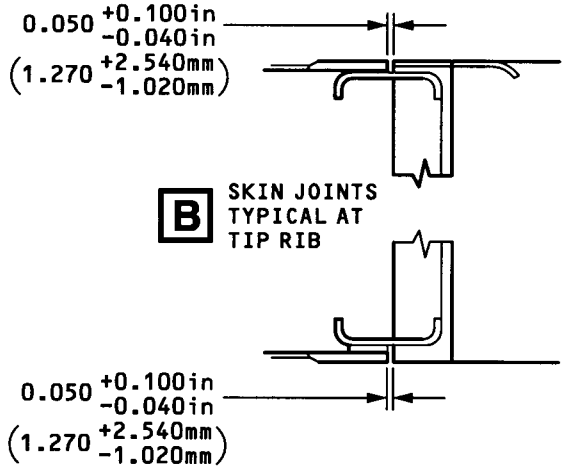
D TYPICAL SKIN JOINT

		WING TIP MAX STEP	
		INTO WIND	OUT OF WIND
LH WING	UPPER FACE	0.051in(1.3mm)	0.051in(1.3mm)
	LOWER FACE	0.051in(1.3mm)	0.051in(1.3mm)
RH WING	UPPER FACE	0.051in(1.3mm)	0.051in(1.3mm)
	LOWER FACE	0.142in(3.6mm)	0.051in(1.3mm)









BM8 57 30 11 4 AZM0 00

Wing Tip - Installation Details
Figure 406

WING TIP - INSPECTION/CHECK

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

1. Transparent Panel, Forward Lights

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 4.7 m (15.5 ft)
Referenced Procedures	
- 57-30-11, P. Block 701	Wing Tip
- 57-30-11, P. Block 801	Wing Tip

B. Procedure

(1)Job Set-up

(a)Position access platform at wing tip, Zone 531(631).

(2)Inspection/Check

(a)Check transparent panel for cleanliness, security of attachment and condition of seal. If necessary, clean and polish in accordance with 57-30-11, P. Block 701.

(b)Check transparent panel for scores, scratches, abrasion and chipped edges; check for cracks emanating from attachment holes. If the surface coating has been penetrated, the panel must be renewed (Ref. 57-30-11, P. Block 801).

(3)Close-up

(a)Withdraw access platform.

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

1. Transparent Panel, Forward Lights - Cleaning

A. Equipment and Material

ITEM	DESIGNATION
A.	Access Platform, 4.7 m (15 ft. 5 in)
B. Material No.	Soap, Orvus Paste or equivalent non-ionic detergent.
C. Material No. 10-002	Anti Icing and De-Icing Materials (Ref. 20-31-00)
D.	Lint-Free Cleaning Cloth.
E. Material No.	Plastic Polish, Meguiar's Mirror Glaze MGH 10 (MIL-C-18767A) or:-
F. Material No.	Windshield Cleaner Compound WH1Z 18767 (MIL-C-18767B)

B. Procedure

(1)Job Set-up

CAUTION : DO NOT SCRATCH TRANSPARENCY. USE ONLY THE SPECIFIED MATERIALS.

(a)Position access platform at wing tip, Zone 531(631).

(2)Cleaning

(a)Flush panel with clean water to remove loose dirt. A non-metallic spatula may be used to dislodge excess dirt or sand, but employ a steady stream of water to flush away the contaminant as it is dislodged.

(b)Wash with a soap and water solution of approximately two teaspoons (10 mil) of Orvus paste (Material No.) or suitable alternative, to one gallon (4.5 litre) of clean water. Do not scrub the surface, but allow the solution to loosen the dirt. If the surface is excessively dirty or is contaminated by oil or grease, add 30 per cent (by volume) of Material No.10-002 to the solution.

(c)Lightly rub the surface with a soft cloth, saturated with the cleaning solution.

(d)Flush away the solution with clean water and dry with a soft cloth.

NOTE : Do not allow soap to dry, it will streak and is hard to remove when dry.

(e)Check the surface for 'water spots' which are small haze areas or streaks which appear blue in color. If present, remove by using a clean cloth moistened only with water.

(3) Polishing

(a)Ensure that the panel surface is free from dust or other contaminants (Refer Para. B. (2) Cleaning).

(b)Mirror Glaze MGH 10 (Material No.)

(i)Shake the container well and apply the polish to a clean cloth, then rub thoroughly to produce a completely clean surface. Do not turn the application cloth over; use one side only.

(ii)The polish will remain wet. Continue to wipe with a clean cloth until the surface is completely dry.

(c)Windshield Cleaner WH1Z 18767 (Material No.)

(i)Shake the container well and apply liberally with a soft cloth, using a circular motion.

(ii)Allow the surface to dry, then wipe off excess material and polish surface with a clean, soft cloth.

(4)Close-up

(a)Ensure that the work area is clean and clear of tools and equipment.

(b)Withdraw access platform.

R WING TIP- APPROVED REPAIRS

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

1. Reason for the Job

A. Repair by Replacement of Lens (Lamp Cover/Transparent Panel).

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 4.7 m (15 ft. 5 in)
B.	Circuit Breaker Safety Clips
C.	Lint-Free Cleaning Cloth
D.	Warning Notices

3. Procedure

A. Job Set-Up
(1)Open, safety and tag the following circuit breakers:-

PANEL	SERVICE	IDENT.	LOCATION
129VU	NAV.LT	1 LA	901/U71
129VU	NAV.LT	11 LA	901/U70
129VU	STROBE LT	11 LV	901/U78

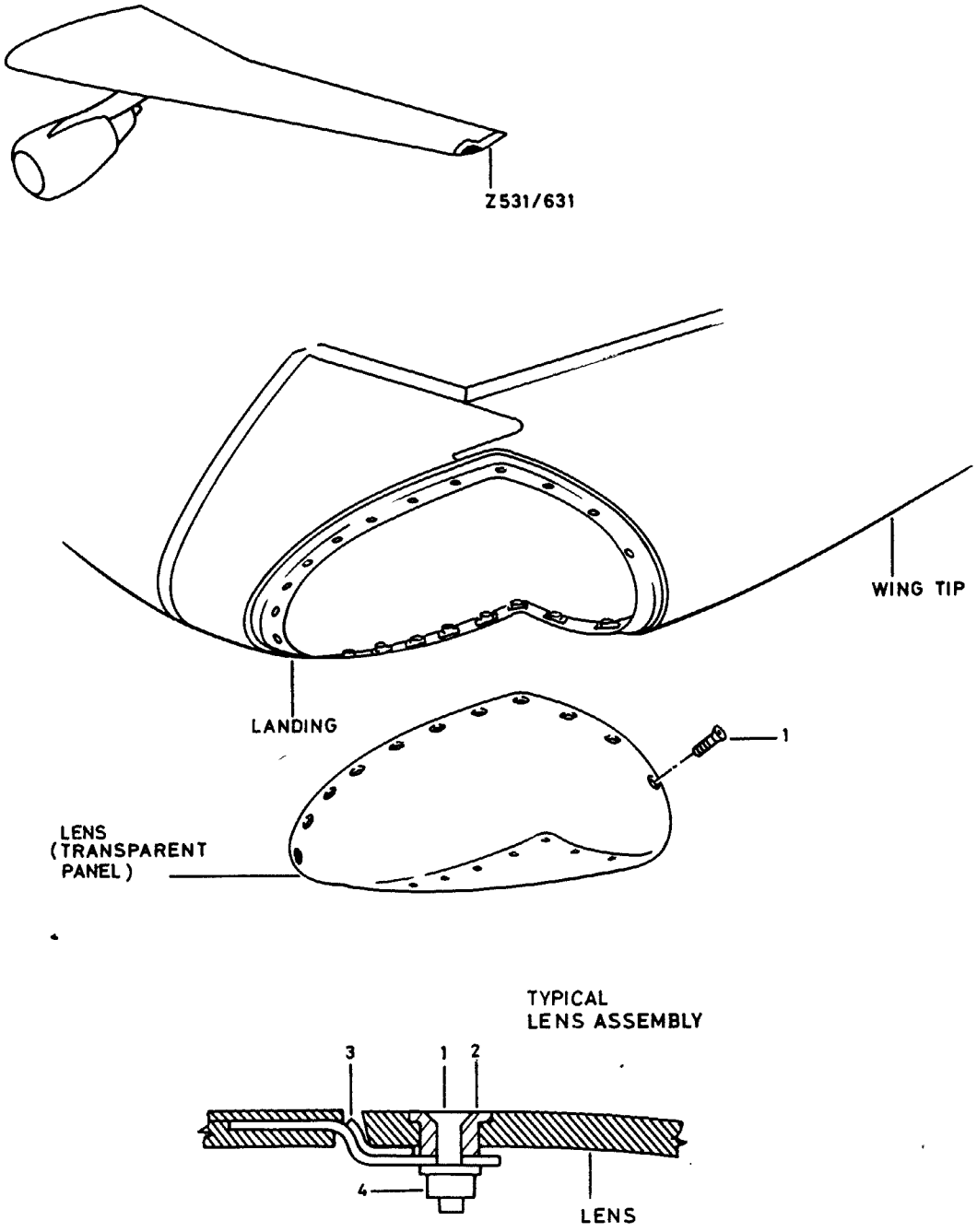
(2)Position access platform at wing tip (Zone 531 or 631).

B. Removal
(Ref. Fig. 801)
(1)Remove and retain bolts (1).
(2)Remove lens (transparent panel) complete with integral bushes (2).

C. Preparation of Replacement Component
(1)Check for correct condition and for security of integral bushes.
(2)Check for correct condition of seal (3) and landing for lens on wing tip, including security of floating plate nuts (4).
(3)Clean internal surface of lens thoroughly, using clean lint-free cloth.

D. Installation
(1)Locate the lens in position, starting at the widest point and turning it towards the landing.
(2)Loosely install the bolts (1).
(3)Progressively tighten bolts (1) to compress seal (3) and match lens with surrounding wing tip skin.

NOTE : Avoid over-tightening. Tighten the bolts enough to nip the lens



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Wing Trip - Lens Installation
Figure 801

and lightly compress the seal.
Do not attempt to seal remaining gap between the lens and wing tip skin; this could cause crazing of the lens.

(4)Clean the exterior of the lens, using clean lint-free cloth.

E. Close-Up

(1)Ensure that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Remove warning notices.
(3)Remove access platform.
(4)Remove safety clips and tags and close circuit breakers 1 LA, 11 LA and 11 LV.

WING TIP FENCE - DEACTIVATION/REACTIVATION

R Ref CDL Sect. 6.03.57 Chap 57 Item 01

WARNING : BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

R CAUTION : THIS PROCEDURE IS TO BE USED ACCORDING TO THE REQUIREMENTS OF THE CDL.

1. Deactivation
(Ref. Fig. 901)

A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 4.7m (15 ft 5 in)
B. Material No. 05-015C	Special Materials (Ref. 20-31-00)
C.	Warning Notice

B. Procedure

(1)Job Set-up

(a)Position access platform at wing tip (Zone 531 or 631).

R CAUTION : NO TRIMMING OF UPPER PART OF WING TIP FENCE IS PERMITTED.

(2)Deactivation

(a)Trim damaged area of lower part of wing tip fence.

(b)Seal open area of wing tip fence using Tape (Material No. 05-015C).

(3)Close-up

R (a)Make sure that the working area is clean and clear of tools and all other items of equipment.

R (b)Remove the access platform.

R (c)Install a temporary warning notice in flight compartment to warn flight crew that the wing tip fence has been deactivated and that aircraft performance is consequently degraded to the limits given in the CDL.

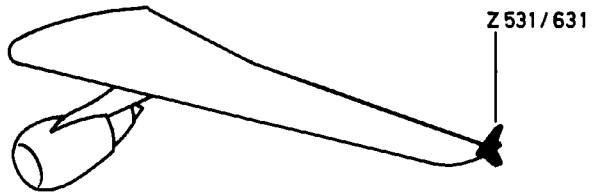
(d)Make an entry in the aircraft technical log.

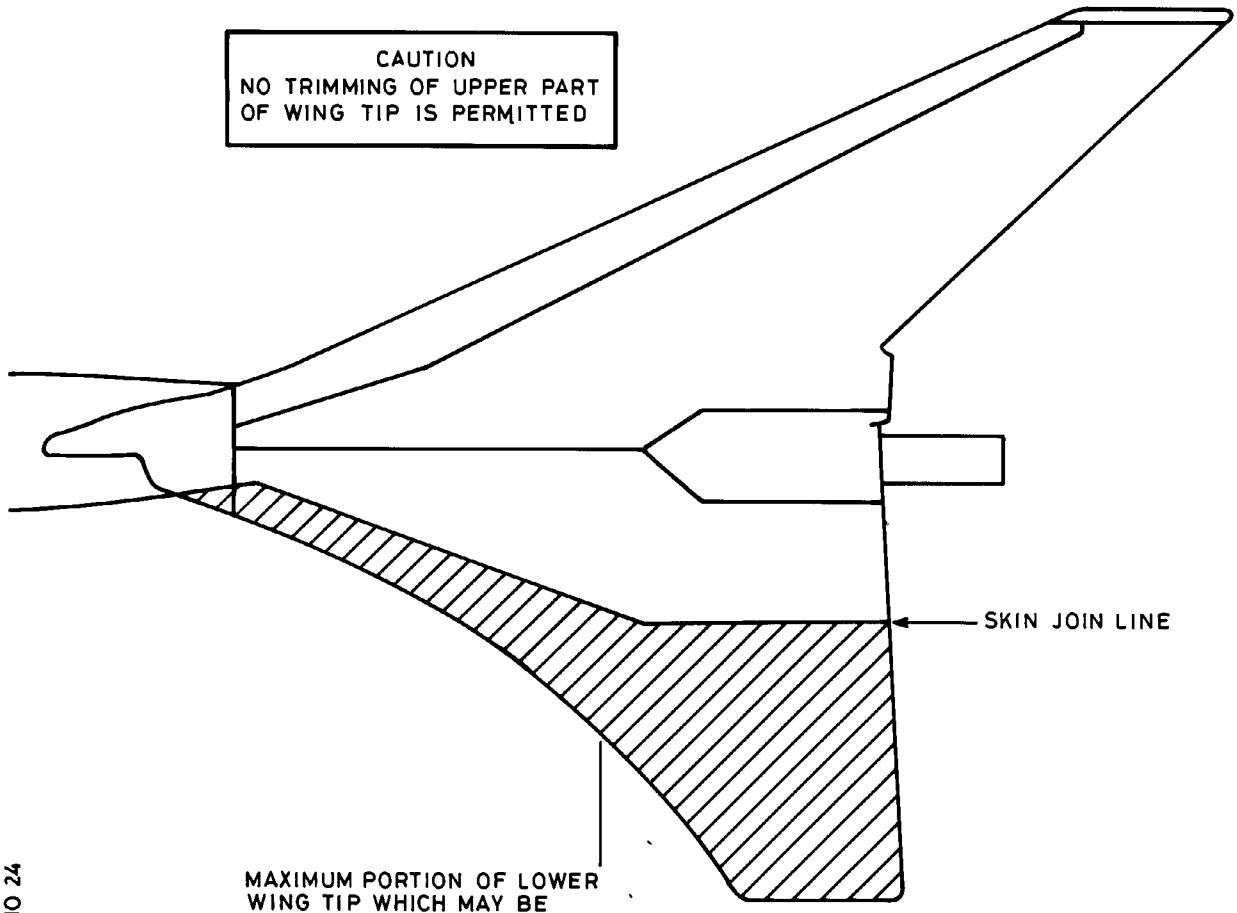
2. Reactivation
(Ref. Fig. 901)

A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 4.7 m (15 ft, 5 in)
Referenced Procedures - 57-30-11, P. Block 401	Wing Tip

B. Procedure





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R

Wing Tip Fence
Figure 901

(1)Job Set-up
(a)Position access platform at wing tip (Zone 531 or 631).
(2)Reactivation
(a)Remove damaged wing tip fence (Ref. 57-30-11, P. Block 401).
(b)Install replacement wing tip fence (Ref. 57-30-11, P. Block 401).
(3)Close-up
R (a)Make sure that the working area is clean and clear of tools and all
R other items of equipment.
R (b)Remove the access platform.
(c)Remove temporary warning notice from flight compartment.
(d)Make an entry in the aircraft technical log.

1. General

A. Leading Edge Structure

The fixed leading edge structure forward of the front spar comprises machined ribs and sheet metal spars, riblets and nose skins. Between the nose skins and the main wing box skins, the upper surface comprises honeycomb cored glass fiber panels, and the lower surface comprises honeycomb cored carbon fiber panels. To maintain moisture resistance, the upper surface glass fiber panels are covered with 'Tedlar'.

B. Leading Edge Control Surfaces

(Ref. Fig. 001)
(Ref. Fig. 002)

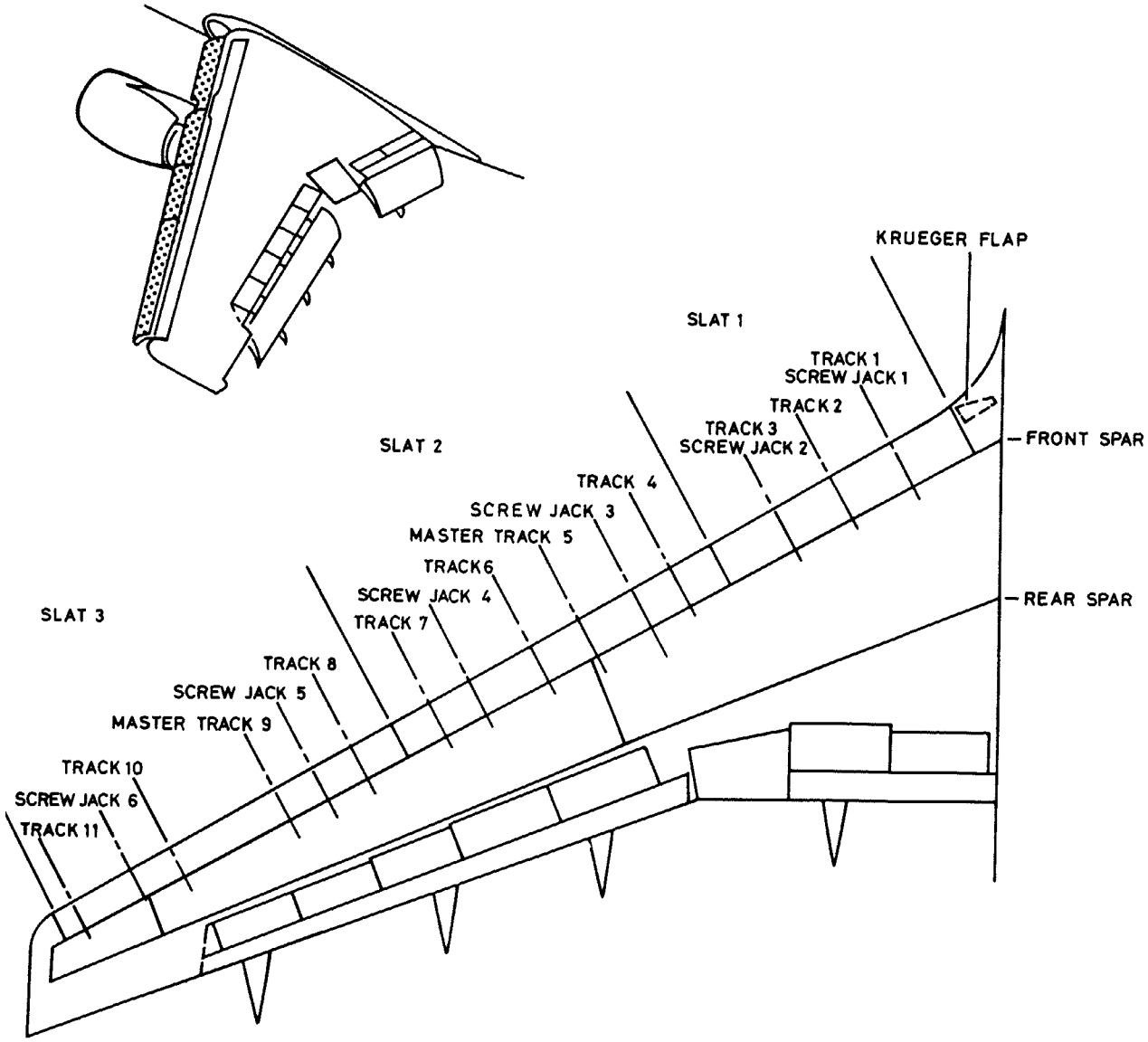
The leading edge control surfaces comprise the following components:-

- Krueger flap
- Slat 1 (inboard)
- Slat 2 and 3 (center and outboard)

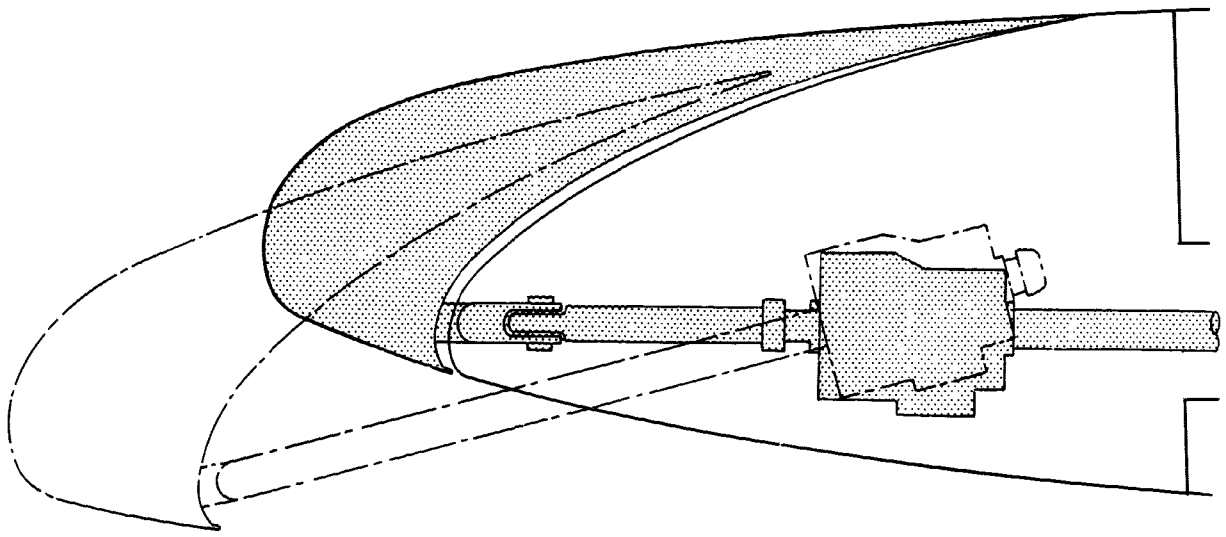
The Krueger flap is located in the wing root fillet and is housed in a box structure which also contains the operating mechanism.

The slats extend from immediately outboard of the Krueger flap to the wing tip. An ice protection system is incorporated in the outboard half of Slat 2 and in the whole of Slat 3.

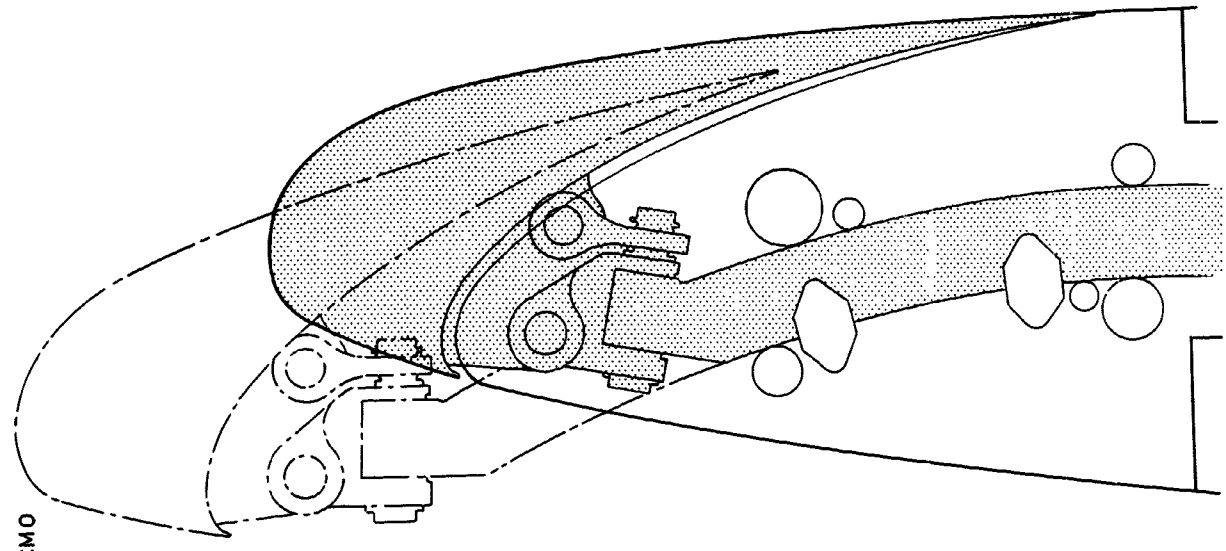
Attached to the slats are curved tracks which run between adjustable rollers mounted in the fixed leading edge structure. A folding nose and associated mechanical linkage is provided in the region of the engine pylon to ensure aerodynamic continuity around the pylon when the slats are extended.



Location of Control Surfaces
Figure 001



SLAT SCREWJACK



SLAT TRACK

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Typical Slat Track Installation
Figure 002

1. General

(Ref. Fig. 001)

The fixed leading edge structure consists of a D-nose assembly of conventional sheet metal spars, skins and ribs mounted at the front of aluminum alloy machined ribs which are bolted to the front spar of the main wing box.

Glass fiber panels with Nomex honeycomb cores form most of the top surface between the D-nose skins and the front spar. Except for one (metal) access door in the pylon region, all the top panels are fixed. With five (metal) exceptions, carbon fiber panels with Nomex honeycomb cores form the bottom surface between the D-nose skins and the front spar. The bottom panels are attached with quick-release fasteners to provide access for inspection and maintenance of the slat rollers, slat drive and other systems. One of the metal panels is fixed.

The machined ribs consist of the following:-

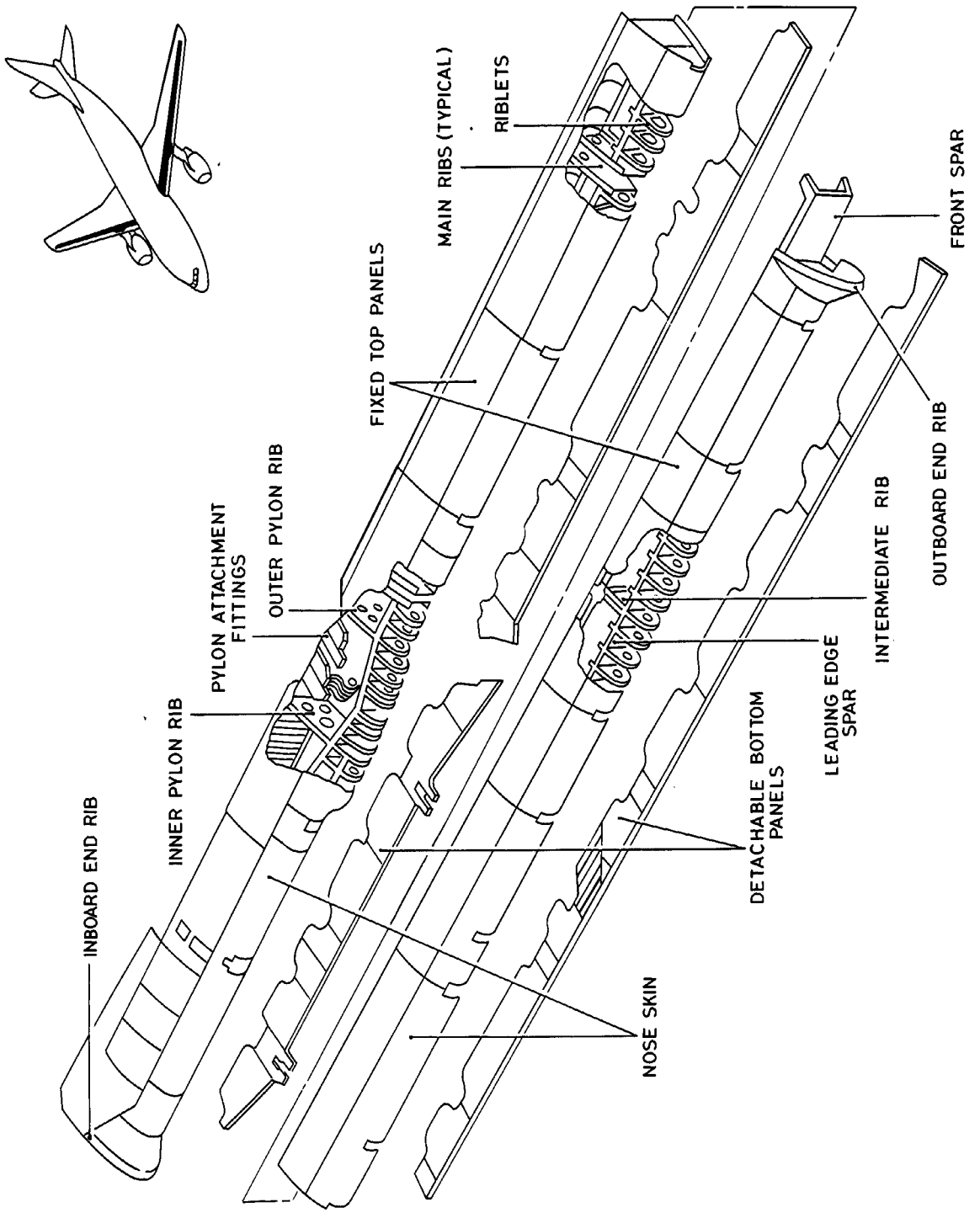
(1) Main ribs mounted in pairs, which carry the slat rollers at the slat track positions and the screwjack trunnion at the slat drive positions. (Slat tracks and screwjacks are mounted together at tracks 1 and 3). A machined fitting embodying an adjustable stop bolt against which a projection on the outboard end rib of slat 1 engages prevents upward deflection of the slat in the retracted position.

(2) Outboard end rib, and inboard end rib, the latter carrying the mounting brackets for the inner leading-edge box containing the Krueger flap.

(3) Inner and outer pylon sealing ribs.

(4) Intermediate ribs which provide additional support for the D-nose assembly and the glass fiber panels.

On the lower surface of the right hand wing, or on some aircraft on both wings, outboard of the pylon and immediately forward of the front spar, a fixed metal skin provides the mounting for the refuel/defuel coupling.



Leading Edge - General Structure
Figure 001

SLEEVE - SPIGOT, PYLON TO WING - REMOVAL/INSTALLATION

R **WARNING** : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND CHOCKS ARE IN
R POSITION.

R FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE
R IN POSITION.

R MAKE SURE THAT YOU ISOLATE THE ELECTRICAL CIRCUITS UPON WHICH WORK IS
R IN PROGRESS.

1. Reason for the Job

A. Replacement of Spigot Sleeve with ball-joint installed.
B. Replacement of Spigot Sleeve with ball-joint removed.

2. Equipment and Materials

ITEM	DESIGNATION	
A. 98A54403022000	Extractor - Sleeve, Wing Spigot	
B. 98A54403022001	Extractor - Sleeve, Wing Spigot	
C. 98A54403022200	Adapter	)Sub. Assy of 98A54403022000
D. 98A54403022201	Bolt	
E. 98A54403022202	Body	
F. 98A54403022203	Flange	
G. 98A54403022204	Stop Ring	
H. 98A54403022205	Extracting Nut	
J. 98A54403022206	Safety Nut	
K. 98A54403022207	Extracting Rod	
L. 98A54403022209	Take-Up Sleeve	)Sub. Assy of 98A54403022000
M. 98A54403022210	Half Block	
N. 98A54403022211	Half Block	
P. 98A54403022212	Half Block	
Q. 98A54403022213	Adjusting Wedge	
R. 98A54403022214	Adjusting Wedge	
S. 98A54403022215	Flange Halves	
T. 98A54403022216	Positioning Block	
U. 98A54403022221	Sleeve	
V. 98A54403022222	Positioning Block	
W. 98A54403022224	Bolt	
X. RCH 121A	Actuating Cylinder 12 Tonne	) Sub. Assy. of 98A54403022000
Y. RCH 202	Actuating Cylinder 20 Tonne	
Z. BGA 21	Adapter	) Sub. Assy of 98A54403022001
AA.BGF 202H	Pressure Gage	
AB.H913	Hose HP	
AC.PA133	Oleo Pneumatic Pump	

ITEM	DESIGNATION
AD.NFE 27-110	Screw
AE.NFE 27-161-M6x30	Screw
AF.NFE 27-161-M4x16	Screw) Sub. Assy of 98A54403022000
AG.NFE 27-162	Screw
AH.NFE 27-411	Nut
AJ.	Torque Spanner 0-150 lbf.in (0-1.7 m.daN)
AK.	Access Platform 2 to 3 m (6 ft 5 in to 9 ft 7 in)
AL.Material No. 09-002	Sealants (Ref. 20-31-00)
AM.Material No. 09-024	Sealants (Ref. 20-31-00)
AP.Material No. 09-018	Sealants (Ref. 20-31-00) alternative to item AL
Referenced Procedures	
- 26-21-15, P. Block 401	Fire Extinguisher Bottle
- 54-51-78, P. Block 401	Spigot Ball Joint
- 54-50-00, P. Block 1	Pylons

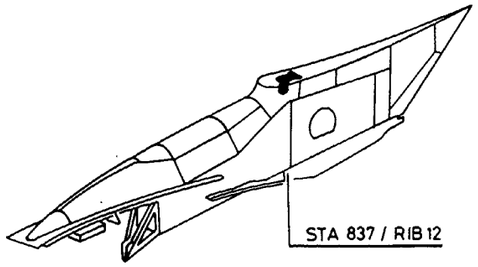
3. Procedure

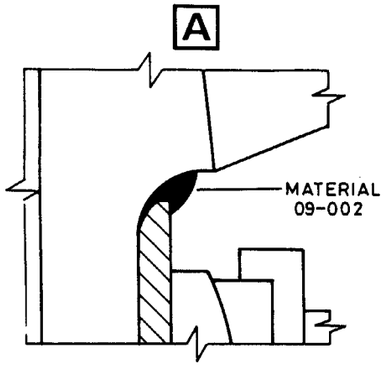
A. Job Set-up
(1)Position access platform.
(2)Open, or remove as applicable, the following access doors and fillets (Ref. 54-50-00, P. Block 1):
- left-hand pylon - 471AL, 472AR, 473AL, 474AR
- right-hand pylon - 481AL, 482AR, 483AL, 484AR

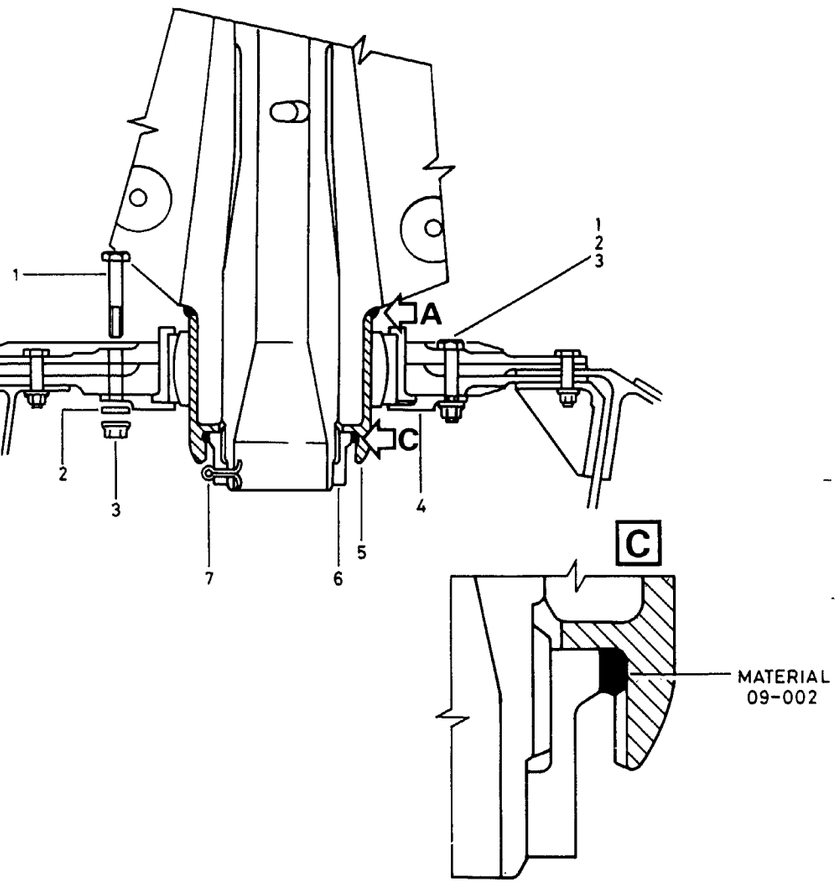
(3)Remove fire extinguisher bottles from the pylon (Ref. 26-21-15, P. Block 401).

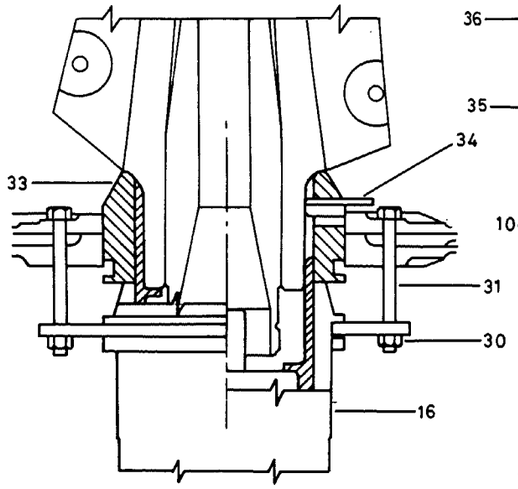
R
R B. Removal - Ball Joint Installed (Ref. Fig. 401)

(1)Remove and retain two diametrically opposed nuts (3) washers (2) and bolts (1) securing ball joint attachment flange (4) to ball joint fitting and install bolts (31) PN98A54403022201.
(2)Remove cotter pin (7) securing nut (6) to the spigot, and remove and retain nut (6).
(3)Install extracting nut (17) PN98A54403022205 into spigot sleeve (5).
(4)Assemble flange (13) PN98A54403022203 over body (16) PN98A54403022202 and secure in position using stop ring (14) PN98A54403022204 and screws (15) NFE 27-162.
(5)Screw safety nut (29) PN98A54403022206 into body (16) PN98A54403022202.
(6)Assemble adapter (28) PN98A54403022200 into body (16) PN98A54403022202 and secure with bolts (18) PN98A54403022224.
(7)Assemble actuating cylinder (24) RCH 121A to adapter (28) PN98A54403022200 and secure with screw (27) NFE 27-161-M4x16.
(8)Install assembled extractor over the spigot sleeve assembly and secure using bolts (31) PN98A54403022201 and nuts (30) NFE 27-411.
(9)Install extracting rod (23) PN98A54403022207 through the actuating cylinder (24) RCH-121A and into extracting nut (17) PN98A54403022205

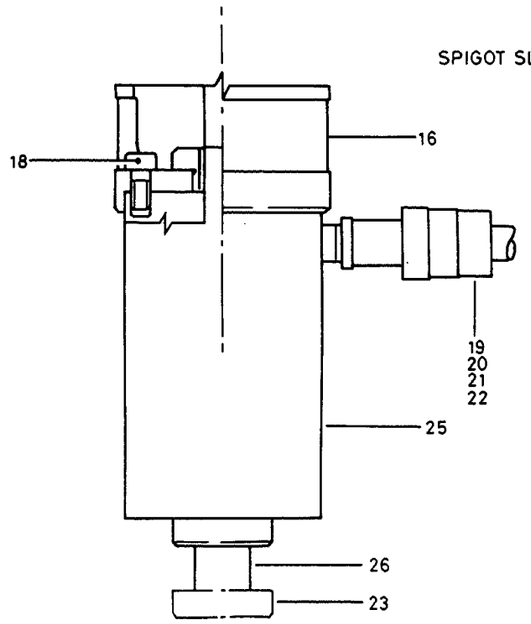




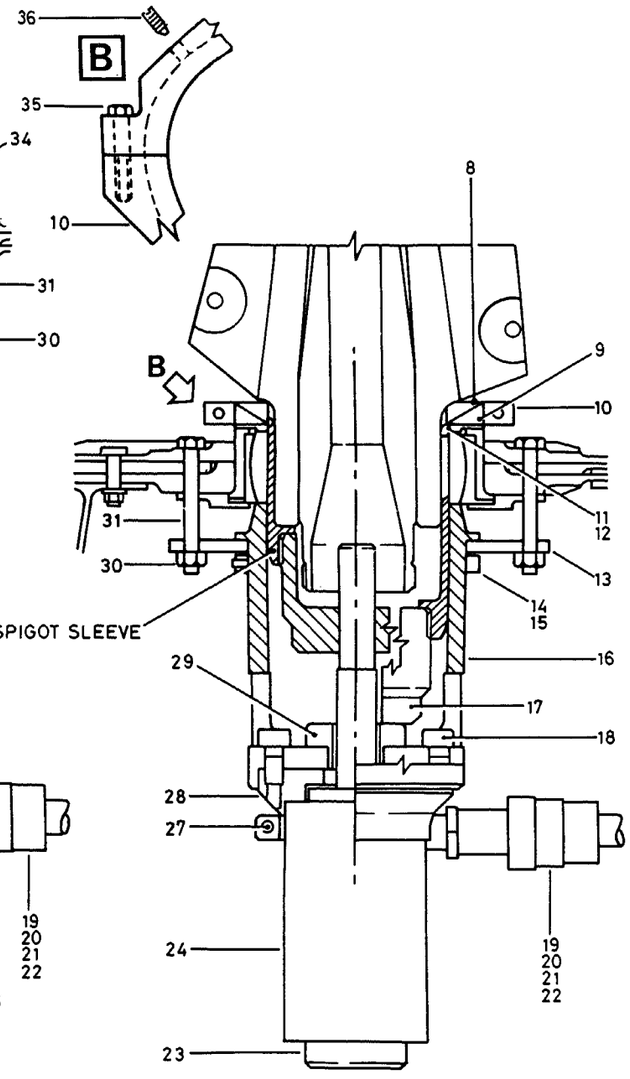




BALL JOINT REMOVED



20 TONNE ACTUATOR



12 TONNE ACTUATOR

Sleeve, Wing Spigot - Removal/Installation
Figure 401

and tighten.

(10)Install half-blocks (8) PN98A54403022212 and (11) PN98A54403022210 or PN98A54403022211, wedges (9) PN98A54403022213 or PN98A54403022214 and hold in position using flange halves (10) PN98A54403022215. Secure the flange halves with screws (35) NFE 27-161-M6x30. Remove play from flange halves by adjusting screws (36) NFE 27-110.

(11)Assemble adapter (19) BGA 21, gage (20) BGF 202H, hose (21) H913, and pump (22) PA133 to actuating cylinder (24) RCH 121A.

(12)Apply pressure to actuating cylinder (24) RCH 121A using pump (22) PA133 and remove spigot sleeve (5) from the spigot until extracting nut (17) PN98A54403022205 comes into contact with safety nut (29) PN98A54403022206. Release the pressure from the actuating cylinder.

(13)Release screws (36) NFE 27-110 and dismantle flange halves (10) PN98A54403022215, half-blocks (8) PN98A54403022212 and (11) PN98A54403022210 or PN98A54403022211 and wedges (9) PN98A54403022213, or PN98A54403022214, re-assemble over the ball joint using positioning blocks (12) PN98A54403022216 in place of half-blocks (11) PN98A54403022210.

(14)Remove extracting rod (23) PN98A54403022207 and nuts (30) NFE 27-411, and the extractor assembly from the spigot mounting.

(15)Remove spigot sleeve (5), by hand, from the spigot.

NOTE : If the spigot sleeve cannot be removed by hand, remove safety nut (29) PN98A54403022206 from body (16) PN98A54403022202, re-assemble the extractor over the spigot and complete the removal.

NOTE : If the spigot sleeve cannot be removed by using actuating cylinder (24) RCH 121A, remove the cylinder and adapter (28) PN98A54403022200 from body (16) PN98A54403022202, fit actuating cylinder (25) RCH 202 directly onto body (16) PN98A54403022202 and secure with bolts (18) PN98A54403022224 . Install as in Para. 3.B. steps (9) thru (11), installing take-up sleeve (26) PN98A54403022209 onto extracting rod (23) PN98A54403022207. Repeat Para 3.B. steps (12) thru (15) inclusive.

(16)Remove extracting nut (17) PN98A54403022205 from spigot sleeve (5) and bolts (31) PN98A54403022201 from the pylon structure.

R NOTE : At this stage do not remove flange halves (10) PN98A54403022215,
R wedges (9) PN98A54403022213 or PN98A54403022211, positioning
R blocks (12) PN98A54403022216 or half blocks (8) PN98A54403022212.

C. Removal - Ball Joint Removed (Ref. Fig. 401)

(1)Remove ball joint (Ref. 54-51-78, P. Block 401).

(2)Remove cotter pin (7) securing nut (6) to the spigot, and remove and retain nut (6).

(3)Install extracting nut (17) PN98A54403022205 into spigot sleeve (5).

(4)Assemble flange (13) PN98A54403022203 over body (16) PN98A54403022202

and secure in position using stop ring (14) PN98A54403022204 and screws (15) NFE 27-162.

(5)Screw safety nut (29) PN98A54403022206 into body (16) PN98A54403022202.

(6)Assemble adapter (28) PN98A54403022200 into body (16) PN98A54403022202 and secure with bolts (18) PN98A54403022224.

(7)Assemble actuating cylinder (24) RCH 121A to adapter (28) PN98A54403022200 and secure with screws (27) NFE 27-161-M4x16.

(8)Slide sleeve (33) PN98A54403022221 over spigot sleeve (5).

(9)Fit bolts (31) PN98A54403022201 through the pylon structure and install the assembled extractor over the spigot/sleeve assembly, secure using bolts (31) PN98A54403022201 and nuts (30) NFE 27-411.

(10)Install extracting rod (23) PN98A54403022207 through the actuating cylinder (24) RCH 121A into extracting nut (17) PN98A54403022205 and tighten.

(11)Assemble adapter (19) BGA 21, gage (20) BGF 202H, hose (21) H913 and pump (22) PA133 to actuating cylinder (24) RCH 121A.

(12)Apply pressure to actuating cylinder (24) RCH 121A using pump (22) PA133 and remove spigot sleeve (5) from the spigot until the extracting nut (17) PN98A54403022205 comes into contact with the safety nut (29) PN98A54403022206. Release the pressure from the actuating cylinder.

(13)Remove extracting rod (23) PN98A54403022207, nuts (30) NFE 27-411 and extractor assembly from the spigot mounting.

(14)Remove spigot sleeve (5) from the spigot, by hand.

NOTE : If the sleeve cannot be removed by hand, remove safety nut (29) PN98A54403022206 from body (16) PN98A54403022202, re-assemble extractor over the spigot and complete removal.

NOTE : If the sleeve cannot be removed using actuating cylinder (24) RCH 121A, remove the cylinder and adapter (28) PN98A54403022200 from the body (16) PN98A54403022202, fit actuating cylinder (25) RCH 202 directly onto body (16) PN98A54403022202 and secure with bolts (18) PN98A54403022224. Install as in Para 3.C. steps (10) thru (11), installing take-up sleeve (26) PN98A54403022209 onto extracting rod (23) PN98A54403022207. Repeat Para 3.C. steps (12) to (14) inclusive.

(15)Partially remove sleeve (33) PN98A54403022221, remove half segments fitted during removal of ball joint. Fit positioning blocks (34) PN98A54403022222 120 deg. apart between the pylon structure and the pylon forward pick-up, fully remove sleeve (33) PN98A54403022221.

(16)Remove extracting nut (17) PN98A54403022205 from the spigot sleeve (5) and bolts (31) PN98A54403022201 from the pylon structure.

NOTE : At this stage do not remove positioning blocks (34) PN98A54403022222.

D. Installation (Ref. Fig. 401)

R CAUTION : EXTREME CARE MUST BE TAKEN WHEN INSTALLING NEW SPIGOT SLEEVE
R ESPECIALLY WHEN THE BALL JOINT HAS NOT BEEN REMOVED AND IT IS
R FOUND NECESSARY TO HEAT THE SLEEVE TO FIT ONTO THE SPIGOT. THE
R MAXIMUM TEMPERATURE THE SLEEVE MAY BE HEATED TO IS 100 deg.C.

(1)Lightly coat inner face of spigot sleeve (5) using sealant (Material No. 09-024) or alternative sealant (Material No. 09-018) and install over spigot.
(2)With the ball joint fitted:
(a)Remove flange halves (10) PN98A54403022215, wedges (9) PN98A54403022213 or PN98A54403022214 and half blocks (8) PN98A54403022212 and (11) PN98A54403022210 or PN98A54403022211.
(b)Secure ball joint attachment flange (4) to ball joint fitting with bolts (1) washers (2) and nuts (3). Tighten nuts.
(3)With the ball joint removed:
(a)Remove positioning blocks (34) PN98A54403022222, fully install spigot sleeve (5) and fit the half segments initially fitted on removal of the ball joint.
(4)Install and torque tighten nut (6) on spigot to 120 lbf in (1,36 mdaN) and secure with new cotter pin (7).

R NOTE : If the cotter pin hole on the spigot sleeve (5) does not align
R with a slot on the nut (6) after torque tightening, it is
R permitted to drill a new cotter pin hole in the spigot sleeve
R between 150 and 210 degrees (approximately opposite) from the
R first cotter pin hole to align with a slot in the nut (6).

(5)Seal the gaps between spigot sleeve (5) and spigot, and nut (6) and spigot sleeve (5) using sealant (Material No. 09-002).
(6)Where removed, fit ball joint (Ref. 54-51-78, P. Block 401).

E. Close-Up
(1)Install fire extinguisher bottles (Ref. 26-21-15, P. Block 401).
(2)Install, or close as applicable, the following access doors and fillets (Ref. 54-50-00, P. Block 1).
left-hand pylon - 471AL, 472AR, 473AL, 474AR
right-hand pylon - 481AL, 482AR, 483AL, 484AR
(3)Remove access platform.
R (4)Make sure that the work area is clean and clear of tools and all other
R items of equipment.

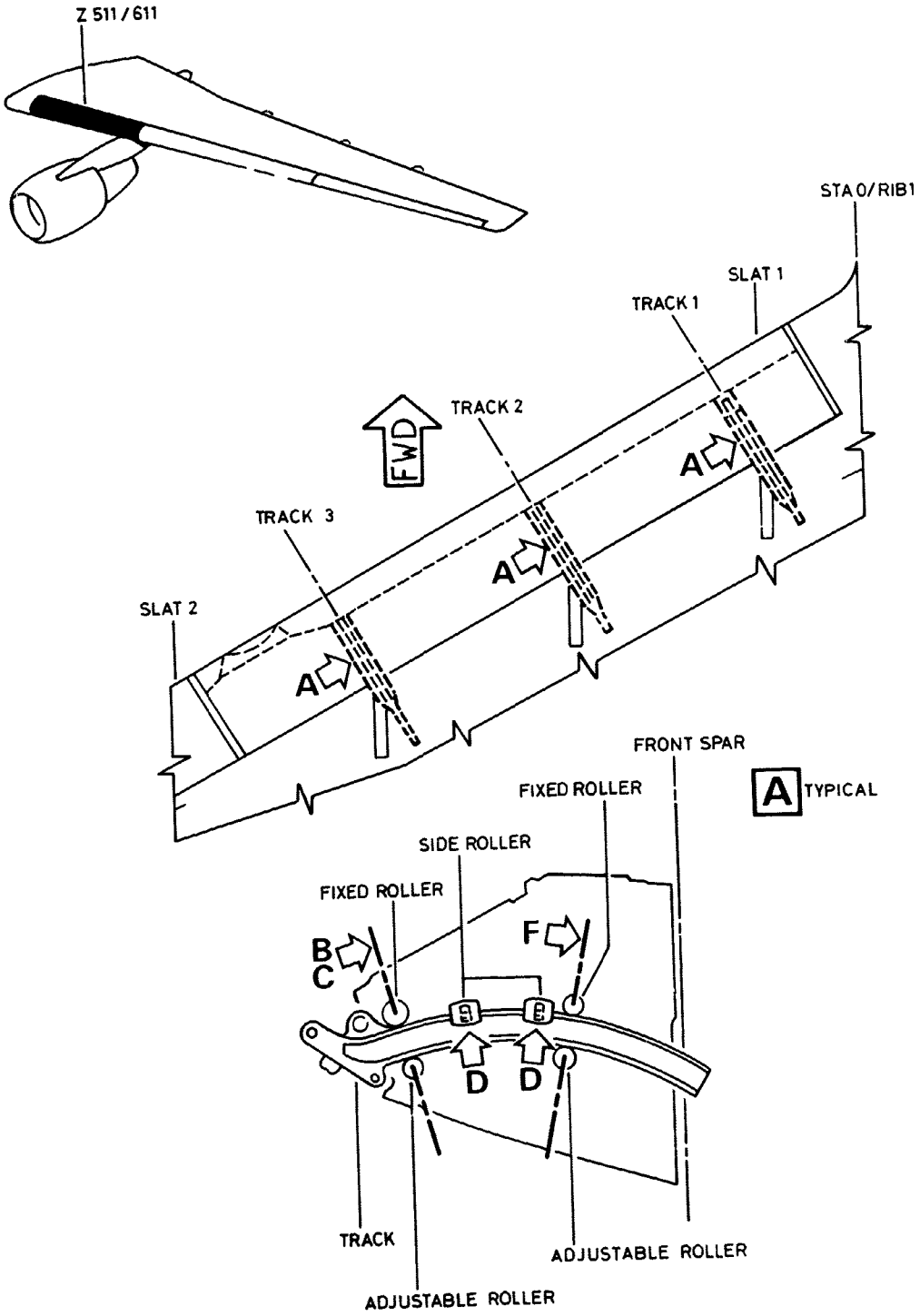
LEADING EDGE ATTACHED FITTINGS - INSPECTION/CHECK

1. Reason for the Job

A. Check of fits and clearances after removal.

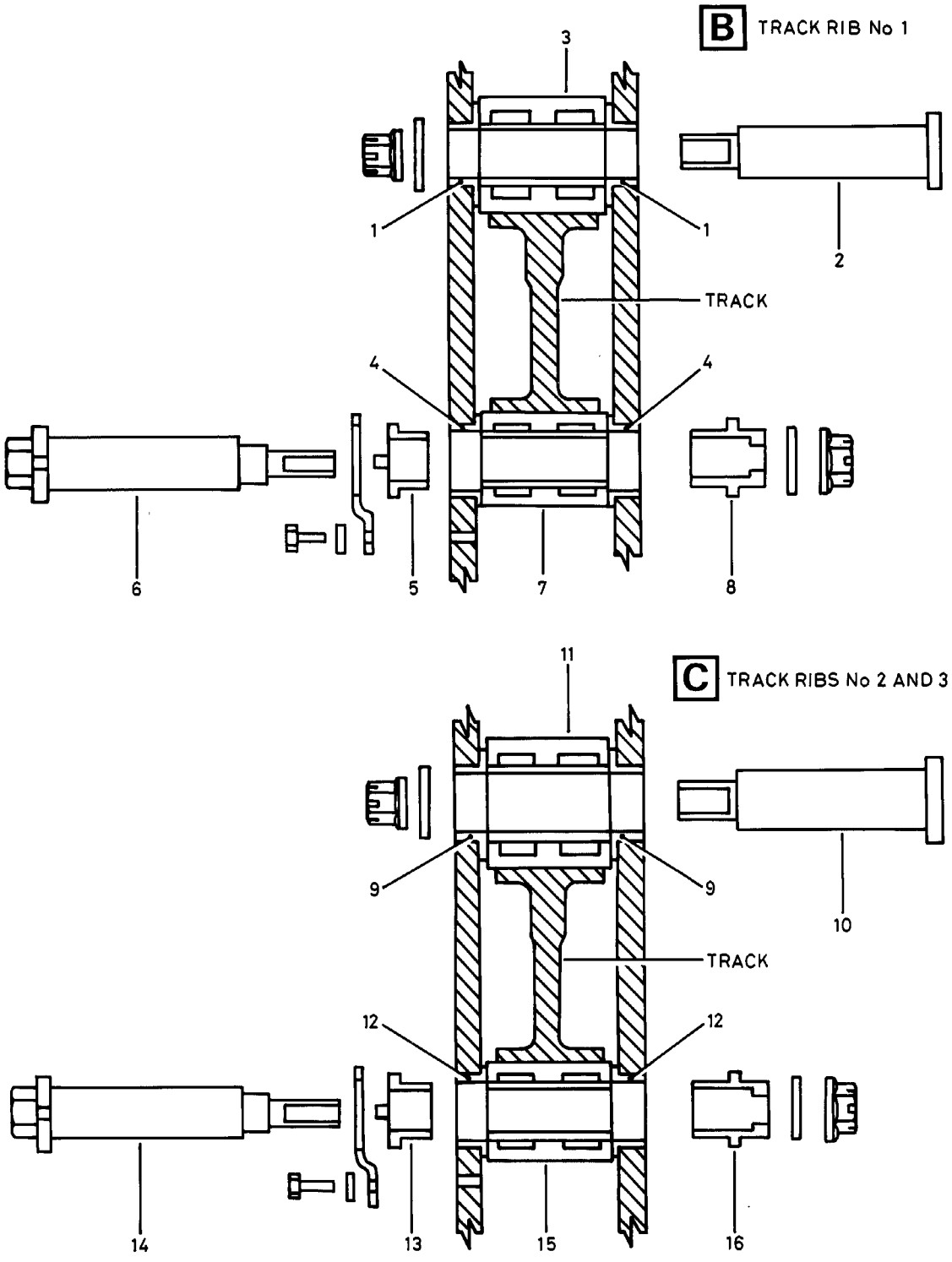
2. Procedure

Table of Fits and Clearences
(Ref. Fig. 601)
(Ref. Fig. 602)
(Ref. Fig. 603)
(Ref. Fig. 604)
(Ref. Fig. 605)
(Ref. Fig. 606)
(Ref. Fig. 607)



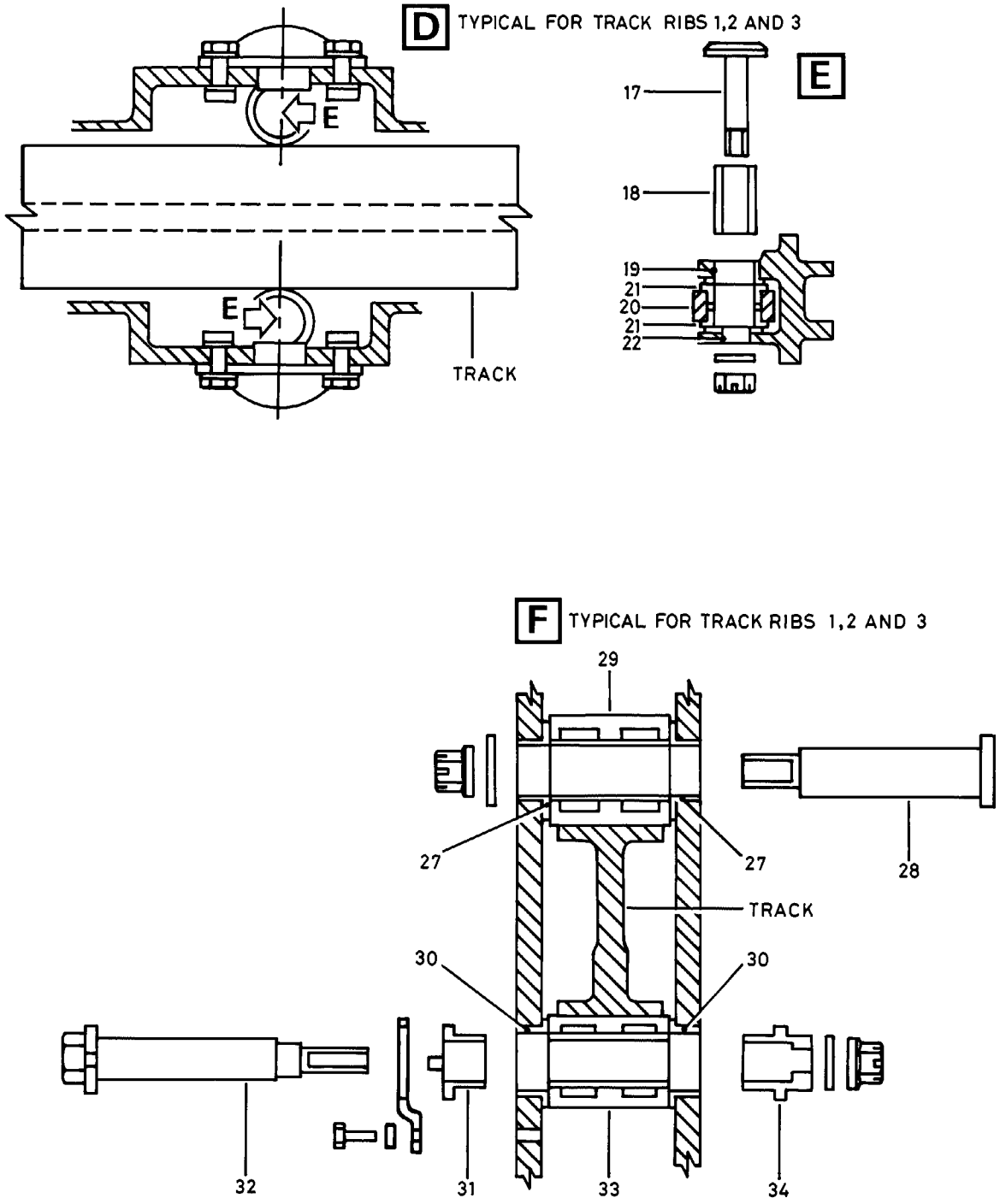
BM7 57 41 34 6 AAMO

Slat 1 Tracks 1, 2 and 3 - Attachments
Figure 601



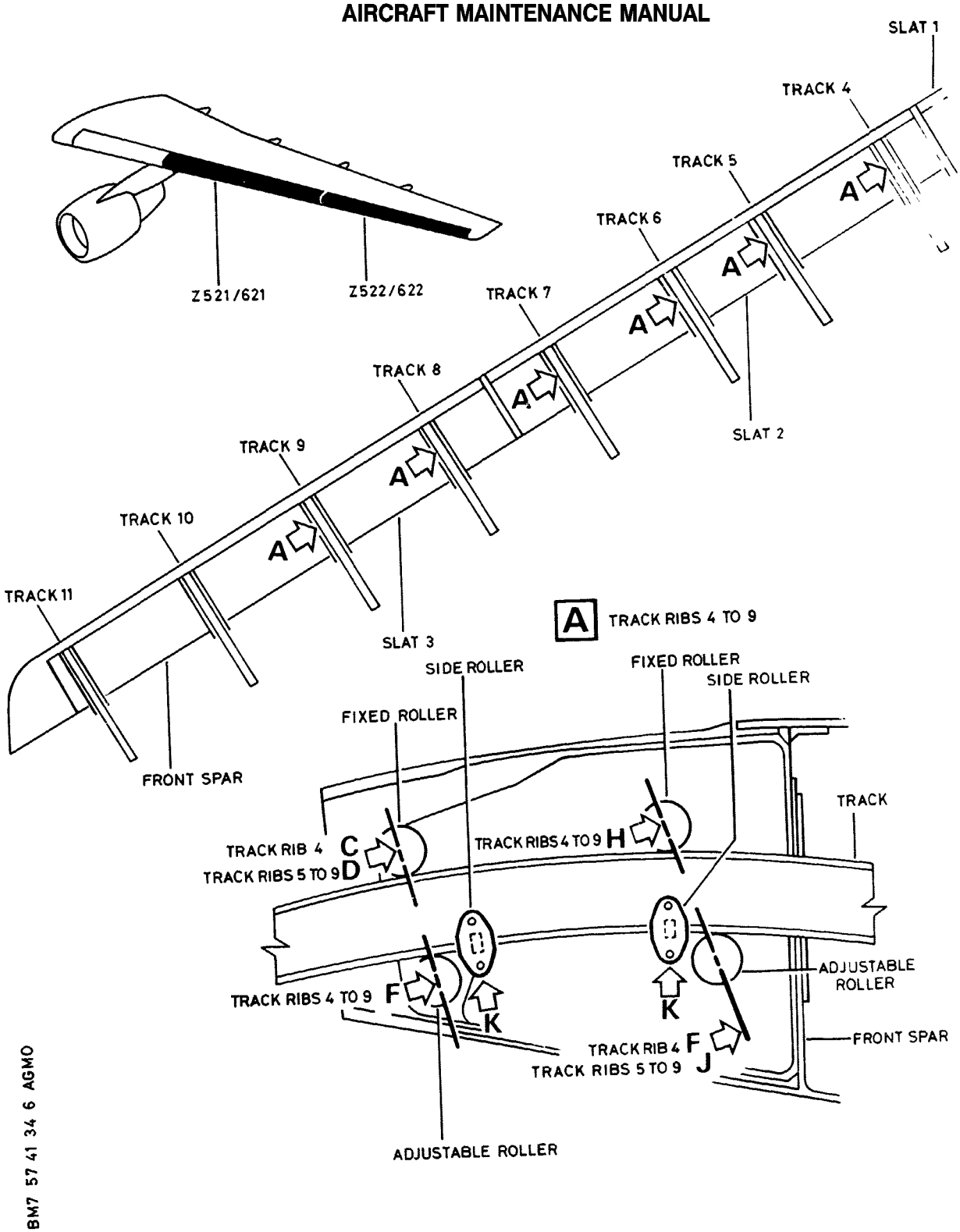
BM7 57 41 34 6 ADMO 00/ 30

Slat 1 - Tracks 1, 2 & 3 - Details
Figure 602

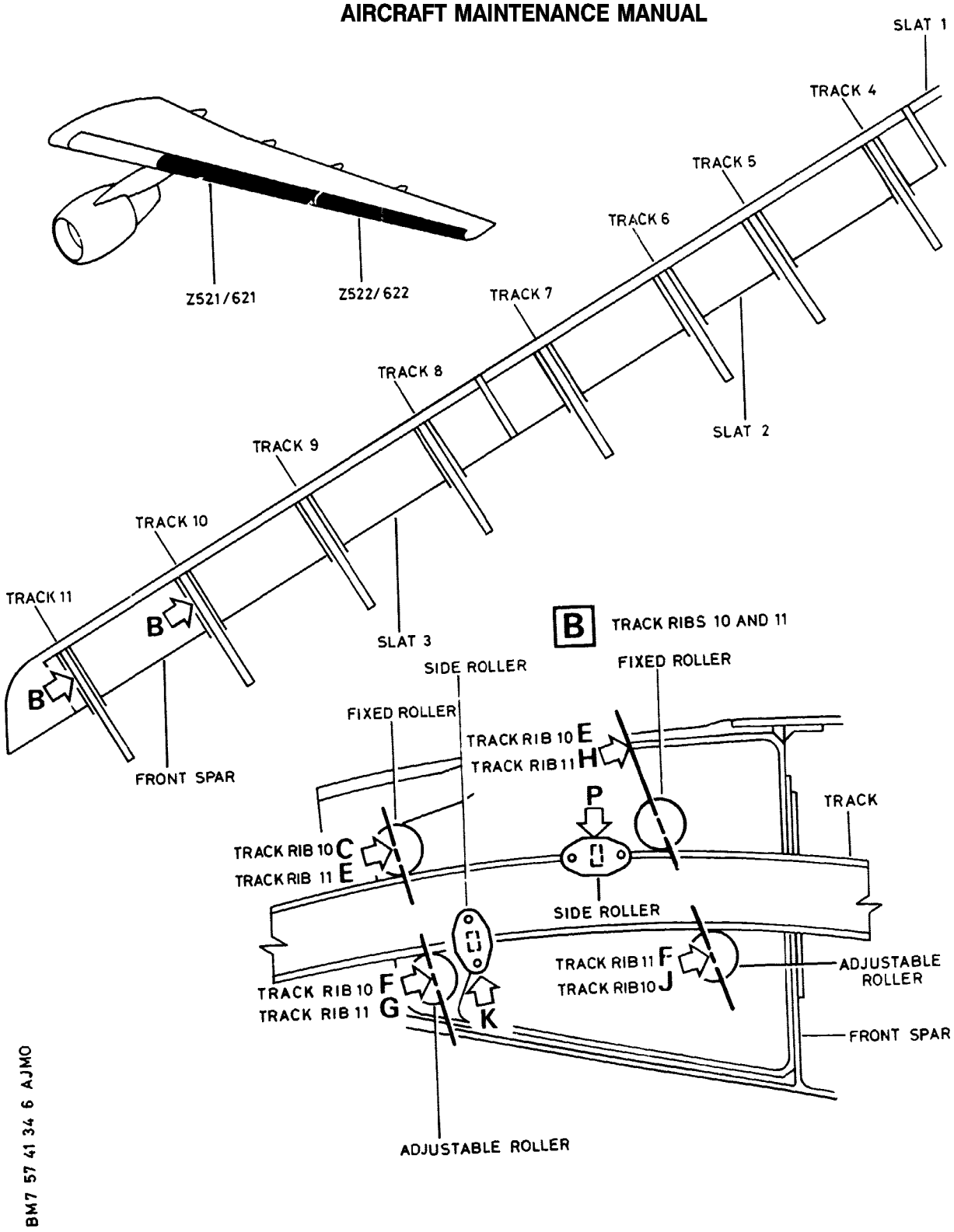


BM7 57 41 34 6 AFMO 00/30

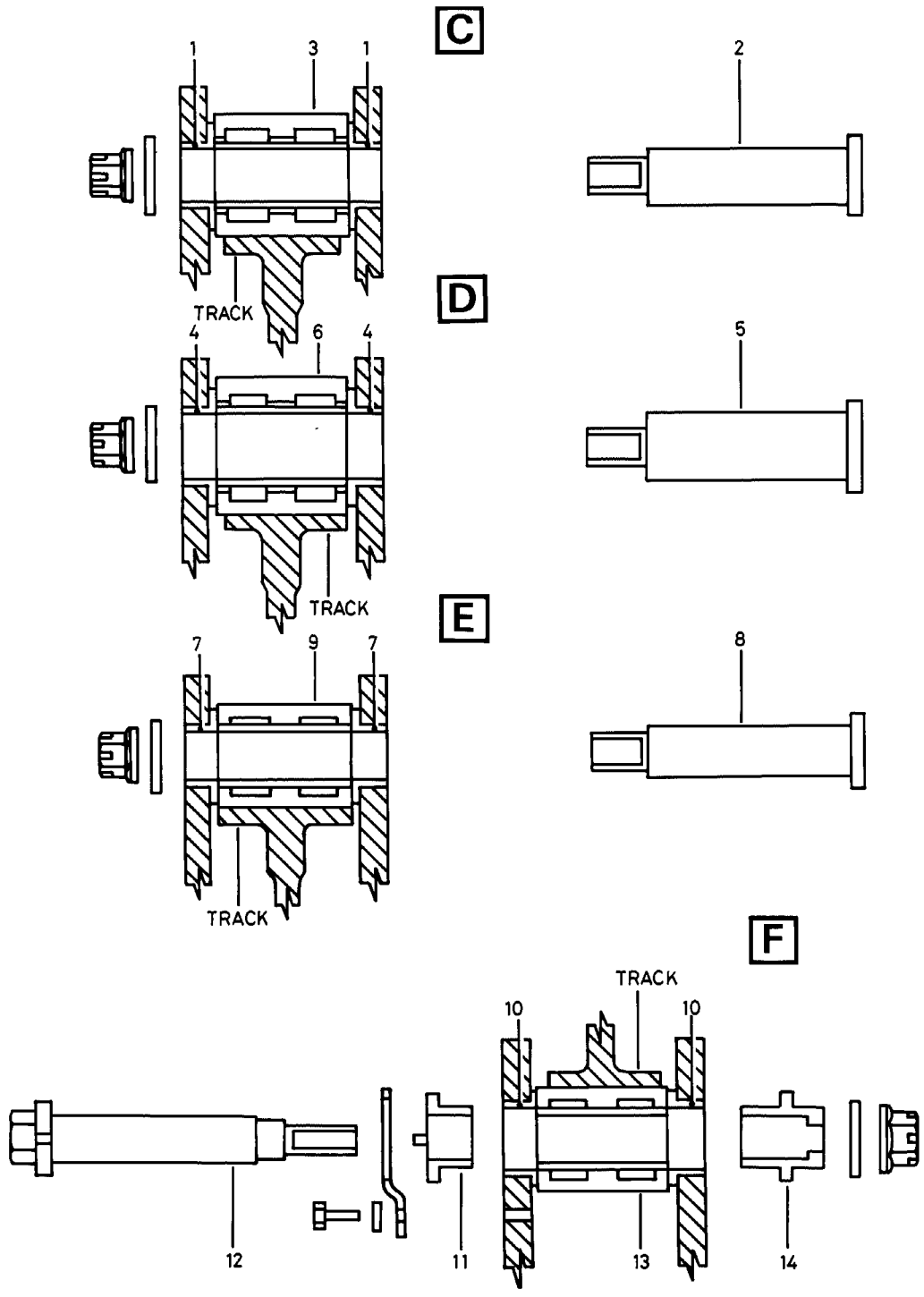
Slat 1 - Tracks 1, 2 & 3 - Details
Figure 603



Slat 2 & 3 - Tracks 4 to 9 - Attachment
Figure 604

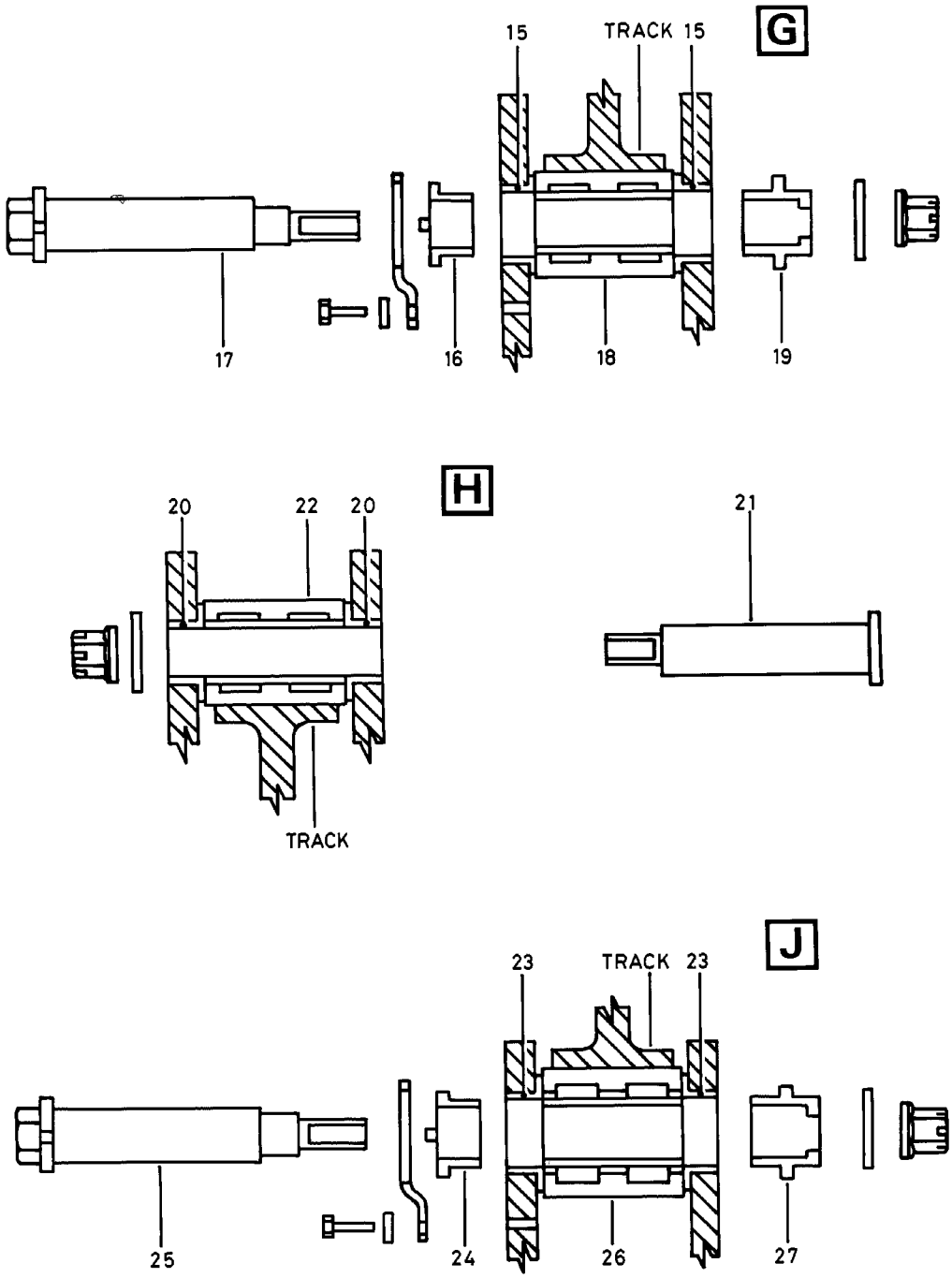


Slat 2 & 3 - Tracks 10 and 11 - Attachment
Figure 605



BM7 57 41 34 6 AMMO 00/30

Slat 2 & 3 - Tracks 4 to 11 - Details
Figure 606



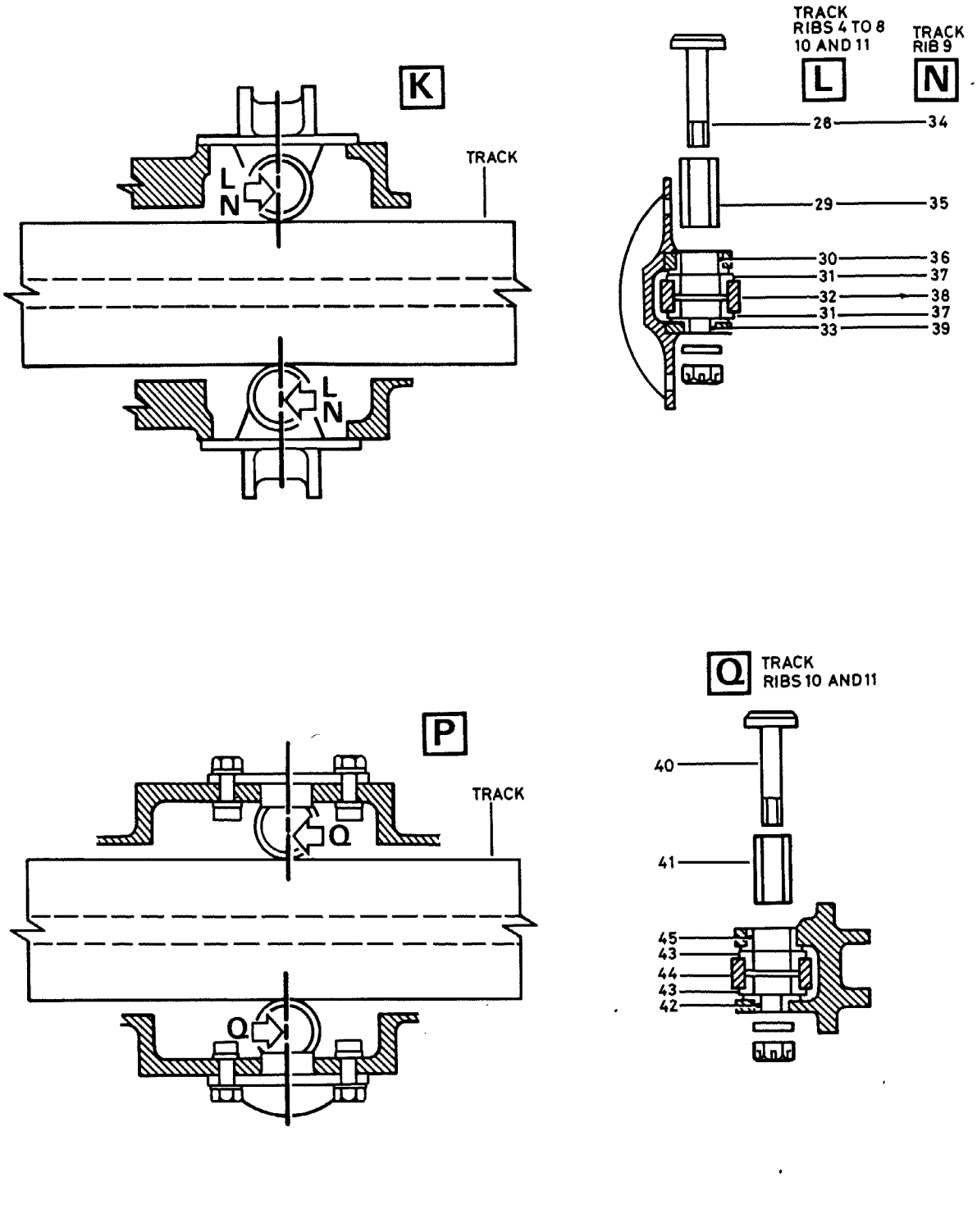
BM7 57 41 34 6 APMO 00/30

Slat 2 & 3 - Tracks 4 to 11 - Details
Figure 607

(Ref. Fig. 608)
A. Slat No.1 thru 11 Attach Fittings

Table of Fits and Clearances (Ref. Fig. 602)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surfaces.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
B ID1	0.8750 (22.225)	0.8763 (22.258)				0.8770 (22.276)	
			0.0003 (0.0007)	0.0021 (0.053)			0.0040 (0.102)
OD2	0.8742 (22.205)	0.8747 (22.218)			0.8730 (22.174) *		
OD2	0.8742 (22.205)	0.8747 (22.218)			0.8730 (22.174) *		
			0.0003 (0.007)	0.0016 (0.040)			0.0035 (0.088)
ID3	0.8750 (22.225)	0.8758 (22.245)				0.8765 (22.263)	
OD3	1.7496 (44.440)	1.7510 (44.475)			1.7485 (44.413) *		
ID4	0.8437 (21.429)	0.8449 (21.460)				0.8458 (21.484)	
			0.0003 (0.007)	0.0020 (0.050)			0.0035 (0.088)
OD5	0.8429 (21.410)	0.8434 (21.422)			0.8423 (21.394)		
ID5	0.5312 (13.492)	0.5322 (13.517)				0.5335 (13.550)	
			0.0002 (0.005)	0.0016 (0.040)			0.0035 (0.088)
OD6	0.5306 (13.477)	0.5310 (13.487)			0.5300 (13.462) *		



Slat 2 & 3 - Tracks 4 to 11 - Details
Figure 608

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
OD6	0.5306 (13.477)	0.5310 (13.487)			0.5300 (13.462)		
			0.0003 (0.007)	0.0014 (0.035)			0.0025 (0.064)
ID7	0.5313 (13.494)	0.5320 (13.512)				0.5325 (13.526)	
OD7	1.2500 (31.750)	1.2510 (31.775)			1.2490 (31.725) *		
ID8	0.5312 (13.492)	0.5322 (13.517)				0.5335 (13.550)	
			0.0002 (0.005)	0.0016 (0.040)			0.0035 (0.088)
OD6	0.5306 (13.477)	0.5310 (13.487)			0.5300 (13.462) *		
OD8	0.8429 (21.410)	0.8434 (21.422)			0.8420 (21.387)		
			0.0003 (0.007)	0.0020 (0.050)			0.0040 (0.102)
ID4	0.8437 (21.429)	0.8449 (21.460)				0.8460 (21.488)	
C ID9	1.0000 (25.400)	1.0010 (25.425)				1.0020 (25.450)	
			0.0003 (0.007)	0.0018 (0.045)			0.0035 (0.088)
OD10	0.9992 (25.380)	0.9997 (25.392)			0.9985 (25.362) *		
OD10	0.9992 (25.380)	0.9997 (25.392)			0.9985 (25.362)		
			0.0003 (0.007)	0.0020 (0.050)			0.0035 (0.088)
ID11	1.0000 (25.400)	1.0012 (25.430)				1.0020 (25.450)	

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
OD11	2.2496 (57.140)	2.2510 (57.175)			2.2485 (57.112) *		
ID12	1.0156 (25.796)	1.0169 (25.829)				1.0180 (25.857)	
			0.0003 (0.007)	0.0021 (0.054)			0.0040 (0.102)
OD13	1.0148 (25.775)	1.0153 (25.788)			1.0140 (25.756)		
ID13	0.6875 (17.462)	0.6886 (17.490)				0.6895 (17.513)	
			0.0002 (0.005)	0.0018 (0.045)			0.0035 (0.088)
OD14	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
ID15	0.6875 (17.462)	0.6882 (17.480)				0.6890 (17.500)	
			0.0002 (0.005)	0.0014 (0.035)			0.0030 (0.076)
OD14	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
OD15	1.4996 (38.090)	1.5010 (38.125)			1.4985 (38.062) *		
ID12	1.0156 (25.796)	1.0169 (25.829)				1.0180 (25.857)	
			0.0003 (0.007)	0.0021 (0.054)			0.0040 (0.102)
OD16	1.0148 (25.775)	1.0153 (25.788)			1.0140 (25.756)		

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
ID16	0.6875 (17.462)	0.6886 (17.490)				0.6895 (17.513)	
			0.0002 (0.005)	0.0018 (0.046)			0.0035 (0.088)
OD14	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		

Table of Fits and Clearances (Ref. Fig. 603)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surfaces.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance Inch. Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits Inch. Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
E	0.2494	0.2498			0.2485		
OD17	(6.334)	(6.344)			(6.312) *		
			0.0002 (0.005)	0.0015 (0.038)			0.0035 (0.088)
ID18	0.2500 (6.350)	0.2509 (6.372)				0.2520 (6.401)	
OD18	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662) *		
			0.0003 (0.007)	0.0017 (0.043)			0.0035 (0.088)
ID19	0.5000 (12.700)	0.5010 (12.725)				0.5020 (12.751)	
OD18	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662) *		
			0.0009 (0.023)	0.0023 (0.059)			0.0045 (0.114)
ID21	0.5006 (12.715)	0.5016 (12.741)				0.5030 (12.776)	
OD21	0.6883 (17.483)	0.6888 (17.496)			0.6883 (17.483)		
			-0.0001 (-0.003)	-0.0013 (-0.033)			0.0000
ID20	0.6875 (17.462)	0.6882 (17.480)				0.6883 (17.483)	
OD20	1.0000 (25.400)	1.0020 (25.451)			0.9990 (25.375) *		

	Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
	ID22	0.2500 (6.350)	0.2509 (6.372)				0.2520 (6.401)	
				0.0002 (0.005)	0.0015 (0.038)			0.0035 (0.088)
	OD17	0.2494 (6.334)	0.2498 (6.344)			0.2485 (6.312) *		
	F ID27	0.5312 (13.492)	0.5322 (13.517)				0.5322 (13.517)	
				0.0002 (0.005)	0.0016 (0.040)			0.0025 (0.064)
	OD28	0.5306 (13.477)	0.5310 (13.487)			0.5297 (13.455) *		
R	OD28	0.5306 (13.477)	0.5310 (13.487)			0.5297 (13.455) *		
				0.0002 (0.005)	0.0014 (0.036)			0.0035 (0.088)
R R	ID29	(0.5312 (13.492)	0.5320 (13.512)				0.5332 (13.543)	
	OD29	1.4996 (38.090)	1.5010 (38.125)			1.4985 (38.062) *		
	ID30	1.0156 (25.796)	1.0169 (25.829)				1.0180 (25.857)	
				0.0003 (0.007)	0.0021 (0.054)			0.0038 (0.096)
	OD31	1.0148 (25.775)	1.0153 (25.788)			1.0142 (25.761)		
	ID31	0.6875 (17.462)	0.6886 (17.490)				0.6895 (17.513)	
				0.0002 (0.005)	0.0018 (0.045)			0.0035 (0.088)
	OD32	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Assy. Clearance Inch. (Milli.) Min.	Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
OD32	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
			0.0002 (0.005)	0.0014 (0.036)			0.0030 (0.076)
ID33	0.6875 (17.462)	0.6882 (17.480)				0.6890 (17.500)	
OD33	1.4996 (38.090)	1.5010 (38.125)			1.4985 (38.062) *		
ID34	0.6875 (17.462)	0.6886 (17.490)				0.6895 (17.513)	
			0.0002 (0.005)	0.0018 (0.045)			0.0035 (0.088)
OD32	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
OD34	1.0148 (25.775)	1.0153 (25.788)			1.0140 (25.756)		
			0.0003 (0.007)	0.0021 (0.054)			0.0040 (0.102)
ID30	1.0156 (25.796)	1.0169 (25.829)				1.0180 (25.857)	

Table of Fits and Clearances (Ref. Fig. 606)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surfaces.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. Max.	Original Mfg Limits: Assy. Clearance (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
C ID1	0.8750 (22.225)	0.8763 (22.258)						0.8770 (22.276)	
			0.0003 (0.007)	0.0021 (0.053)					0.0040 (0.102)
OD2	0.8742 (22.205)	0.8747 (22.218)			0.8730 (22.174) *				
OD2	0.8742 (22.205)	0.8747 (22.218)			0.8730 (22.174) *				
			0.0003 (0.007)	0.0016 (0.040)					0.0035 (0.088)
ID3	0.8750 (22.225)	0.8758 (22.245)						0.8765 (22.263)	
OD3	1.7496 (44.439)	1.7510 (44.475)			1.7485 (44.413) *				
D ID4	1.0000 (25.400)	1.0010 (25.425)						1.0020 (25.450)	
			0.0003 (0.007)	0.0018 (0.045)					0.0035 (0.088)
OD5	0.9992 (25.380)	0.9997 (25.392)			0.9985 (25.362) *				
OD5	0.9992 (25.380)	0.9997 (25.392)			0.9985 (25.362) *				
			0.0003 (0.007)	0.0020 (0.050)					0.0035 (0.088)
ID6	1.0000 (25.400)	1.0012 (25.430)						1.0020 (25.450)	

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
OD6	2.2496 (57.140)	2.2510 (57.175)			2.2485 (57.112) *		
E ID7	0.6875 (17.462)	0.6886 (17.490)				0.6895 (17.513)	
			0.0002 (0.005)	0.0018 (0.045)			0.0035 (0.088)
OD8	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
OD8	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
			0.0002 (0.005)	0.0014 (0.035)			0.0030 (0.076)
ID9	0.6875 (17.462)	0.6882 (17.480)				0.6890 (17.500)	
OD9	1.4996 (38.090)	1.5010 (38.125)			1.4985 (38.062) *		
F ID10	1.0156 (25.796)	1.0169 (25.829)				1.0180 (25.857)	
			0.0003 (0.007)	0.0021 (0.054)			0.0040 (0.102)
OD11	1.0148 (25.775)	1.0153 (25.788)			1.0140 (25.756)		
ID11	0.6875 (17.462)	0.6886 (17.490)				0.6895 (17.513)	
			0.0002 (0.005)	0.0018 (0.045)			0.0035 (0.088)
OD12	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
OD12	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
			0.0002 (0.005)	0.0014 (0.035)			0.0030 (0.076)
ID13	0.6875 (17.462)	0.6882 (17.480)				0.6890 (17.500)	
OD13	1.4996 (38.090)	1.5010 (38.125)			1.4985 (38.062) *		
ID14	0.6875 (17.462)	0.6886 (17.490)				0.6895 (17.513)	
			0.002 (0.005)	0.0018 (0.045)			0.0035 (0.088)
OD12	0.6868 (17.444)	0.6873 (17.457)			0.6860 (17.424) *		
OD14	1.0148 (25.775)	1.0153 (25.788)			1.0140 (25.756)		
			0.0003 (0.007)	0.0021 (0.054)			0.0040 (0.102)
ID10	1.0156 (25.796)	1.0169 (25.829)				1.0180 (25.857)	

With removal - Table of Fits and Clearances (Ref. Fig. 607)
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
G ID15	0.8437 (21.429)	0.8449 (21.460)				0.8460 (21.488)	
			0.0003 (0.007)	0.0020 (0.050)			0.0040 (0.102)
OD16	0.8429 (21.410)	0.8434 (21.422)			0.8420 (21.387)		
ID16	0.5312 (13.492)	0.5322 (13.517)				0.5335 (13.550)	
			0.0002 (0.005)	0.0016 (0.040)			0.0035 (0.088)
OD17	0.5306 (13.477)	0.5310 (13.487)			0.5300 (13.462) *		
OD17	0.5306 (13.477)	0.5310 (13.487)			0.5300 (13.462) *		
			0.0002 (0.005)	0.0014 (0.036)			0.0025 (0.064)
ID18	0.5312 (13.492)	0.5320 (13.512)				0.5325 (13.526)	
OD18	1.2500 (31.750)	1.2510 (31.775)			1.2490 (31.725) *		
ID19	0.5312 (13.492)	0.5322 (13.517)			0.5300 (13.462)		
			0.0002 (0.005)	0.0016 (0.040)			0.0035 (0.088)
OD17	0.5306 (13.477)	0.5310 (13.487)				0.5335 (13.550)	

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
OD19	0.8429 (21.410)	0.8434 (21.422)			0.8420 (21.387)		
			0.0003 (0.007)	0.0020 (0.050)			0.0040 (0.102)
ID15	0.8437 (21.429)	0.8499 (21.460)				0.8460 (21.488)	
H	0.5312 (13.492)	0.5322 (13.517)				0.5335 (13.550)	
ID20			0.0002 (0.005)	0.0016 (0.040)			0.0035 (0.088)
OD21	0.5306 (13.477)	0.5310 (13.487)			0.5300 (13.462) *		
OD21	0.5306 (13.477)	0.5310 (13.487)			0.5300 (13.462) *		
			0.0002 (0.005)	0.0014 (0.036)			0.0025 (0.064)
ID22	0.5312 (13.492)	0.5320 (13.512)				0.5325 (13.526)	
OD22	1.2500 (31.750)	1.2510 (31.775)			1.2490 (31.725) *		
J	1.1875 (30.162)	1.1890 (30.200)				1.1900 (30.225)	
ID23			0.0003 (0.007)	0.0025 (0.063)			0.0040 (0.102)
OD24	1.1865 (30.137)	1.1872 (30.155)			1.1860 (30.125)		
ID24	0.8750 (22.225)	0.8763 (22.258)				0.8770 (22.276)	
			0.0003 (0.007)	0.0021 (0.053)			0.0040 (0.102)
OD25	0.8742 (22.205)	0.8747 (22.218)			0.8730 (22.174) *		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
OD25	0.8742 (22.205)	0.8747 (22.218)			0.8730 (22.174) *		
			0.0003 (0.007)	0.0016 (0.040)			0.0035 (0.088)
ID26	0.8750 (22.225)	0.8758 (22.245)				0.8765 (22.263) *	
OD26	1.7496 (44.440)	1.7510 (44.475)			1.7485 (44.413) *		
ID27	0.8750 (22.225)	0.8763 (22.258)				0.8770 (22.876)	
			0.0003 (0.007)	0.0021 (0.053)			0.0040 (0.102)
OD25	0.8742 (22.205)	0.8747 (22.218)			0.8730 (22.174) *		
OD27	1.1865 (30.137)	1.1872 (30.155)			1.1860 (30.125)		
			0.0003 (0.007)	0.0025 (0.063)			0.0040 (0.102)
ID23	1.1875 (30.162)	1.1890 (30.200)				1.1900 (30.225)	

With removal - Table of Fits and Clearances (Ref. Fig. 608)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
L OD28	0.2494 (6.334)	0.2498 (6.344)			0.2485 (6.312) *		
			0.0002 (0.005)	0.0013 (0.033)			0.0030 (0.076)
ID29	0.2500 (6.350)	0.2507 (6.368)				0.2515 (6.388)	
OD29	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662) *		
			0.0003 (0.007)	0.0017 (0.043)			0.0035 (0.088)
ID30	0.5000 (12.700)	0.5010 (12.725)				0.5020 (12.751)	
OD29	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662)		
			0.0009 (0.023)	0.0023 (0,059)			0.0045 (0,114)
ID31	0.5006 (12.715)	0.5016 (12.741)				0.5030 (12.776)	
OD31	0.6883 (17.483)	0.6888 (17.496)			0.6883 (17.483)		
			-0.0001 (-0.003)	-0.0013 (-0.033)			0.0000
ID32	0.6875 (17.462)	0.6882 (17.480)				0.6883 (17.483)	
OD32	1.0000 (25.400)	1.0020 (25.451)			0.9990 (25.375) *		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
ID33	0.2500 (6.350)	0.2509 (6.372)				0.2520 (6.401)	
			0.0002 (0.005)	0.0015 (0.038)			0.0035 (0.088)
OD28	0.2494 (6.334)	0.2498 (6.344)			0.2485 (6.312) *		
N OD34	0.2494 (6.334)	0.2498 (6.344)			0.2485 (6.312) *		
			0.0002 (0.005)	0.0013 (0.033)			0.0030 (0.076)
ID35	0.2500 (6.350)	0.2507 (6.368)				0.2515 (6.388)	
OD35	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662) *		
			0.0003 (0.007)	0.0017 (0.043)			0.0035 (0.088)
ID36	0.5000 (12.700)	0.5010 (12.725)				0.5020 (12.751)	
OD35	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662) *		
			0.0009 (0.023)	0.0023 (0.059)			0.0045 (0.114)
ID37	0.5006 (12.715)	0.5016 (12.741)				0.5030 (12.776)	
OD37	0.6883 (17.483)	0.6888 (17.496)			0.6883 (17.483)		
			-0.0001 (-0.003)	-0.0013 (-0.033)			0.0000
ID38	0.6875 (17.462)	0.6882 (17.480)				0.6883 (17.483)	
OD38	1.1300 (28.702)	1.1320 (28.753)			1.1290 (28.677) *		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. Min.	Original Mfg Limits: Assy. Clearance (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. Min.	In-Service Wear Limits: Dimension Limits (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
ID39	0.2500 (6.350)	0.2509 (6.372)				0.2520 (6.401)	
			0.0002 (0.005)	0.0015 (0.038)			0.0035 (0.088)
OD34	0.2494 (6.334)	0.2498 (6.344)			0.2485 (6.312) *		
Q OD40	0.2494 (6.334)	0.2498 (6.344)			0.2485 (6.312) *		
			0.0002 (0.005)	0.0015 (0.038)			0.0035 (0.088)
ID41	0.2500 (6.350)	0.2509 (6.372)				0.2520 (6.401)	
OD40	0.2494 (6.334)	0.2498 (6.344)			0.2485 (6.312) *		
			0.0002 (0.005)	0.0015 (0.038)			0.0035 (0.088)
ID42	0.2500 (6.350)	0.2509 (6.372)				0.2520 (6.401)	
OD41	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662) *		
			0.0009 (0.023)	0.0023 (0.059)			0.0045 (0.114)
ID43	0.5006 (12.715)	0.5016 (12.741)				0.5030 (12.776)	
ID44	0.6875 (17.462)	0.6882 (17.480)				0.6883 (17.483)	
			-0.0001 (-0.003)	-0.0013 (-0.033)			0.0000
OD43	0.6883 (17.483)	0.6888 (17.496)			0.6883 (17.483)		
OD44	1.0000 (25.400)	1.0020 (25.451)			0.9990 (25.375) *		

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
ID45	0.5000 (12.700)	0.5010 (12.725)				0.5020 (12.751)	
			0.0003 (0.007)	0.0017 (0.043)			0.0035 (0.088)
OD41	0.4993 (12.682)	0.4997 (12.692)			0.4985 (12.662) *		

SLAT 1 - DESCRIPTION AND OPERATION

1. Description

**ON A/C 001-003,

(Ref. Fig. 001)

R **ON A/C 004-200,

(Ref. Fig. 002)

**ON A/C 001-001,

Slat 1 is of aluminum alloy, comprising three track ribs, two of which serve also as jack ribs, and 34 additional ribs covered by riveted front and rear skins. An extruded section forms the trailing edge and a folding door is located in the leading edge outboard of track rib 3.

Track ribs and jack ribs are machined components, each having a lug which protrudes from the rear skin. Two spherical bearings are secured at each lug protrusion. Hoist fittings, at track ribs 1 and 3, are reversible for stowage or lifting. Ribs 29 and 31 are also machined and provide attachment for the folding door. A rubber failsafe stop is provided adjacent to rib 31.

R **ON A/C 002-200,

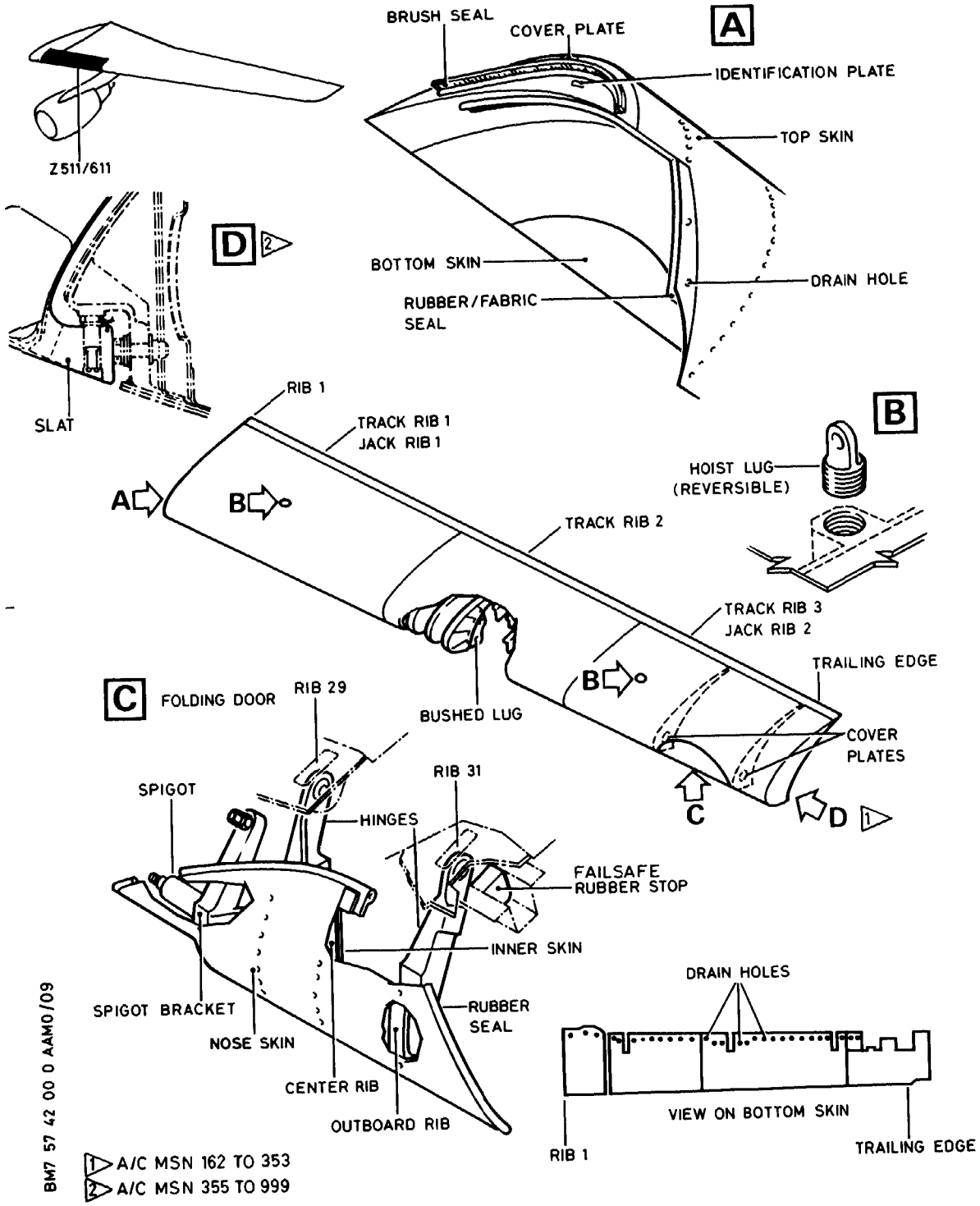
Slat 1 is of aluminum alloy, comprising three track ribs, two of which serve also as jack ribs, and 34 additional ribs covered by riveted front and rear skins. An extruded section forms the trailing edge and a folding door is located in the leading edge outboard of track rib 3.

Track ribs and jack ribs are machined components, each having a lug which protrudes from the rear skin. Two spherical bearings are secured at each lug protrusion. Plastic plugs are installed at track ribs 1 and 3. These can be removed and replaced with a standard NSA reversible hoist fitting for lifting and stowage. Ribs 29 and 31 are also machined and provide attachment for the folding door. A rubber failsafe stop is provided adjacent to rib 31.

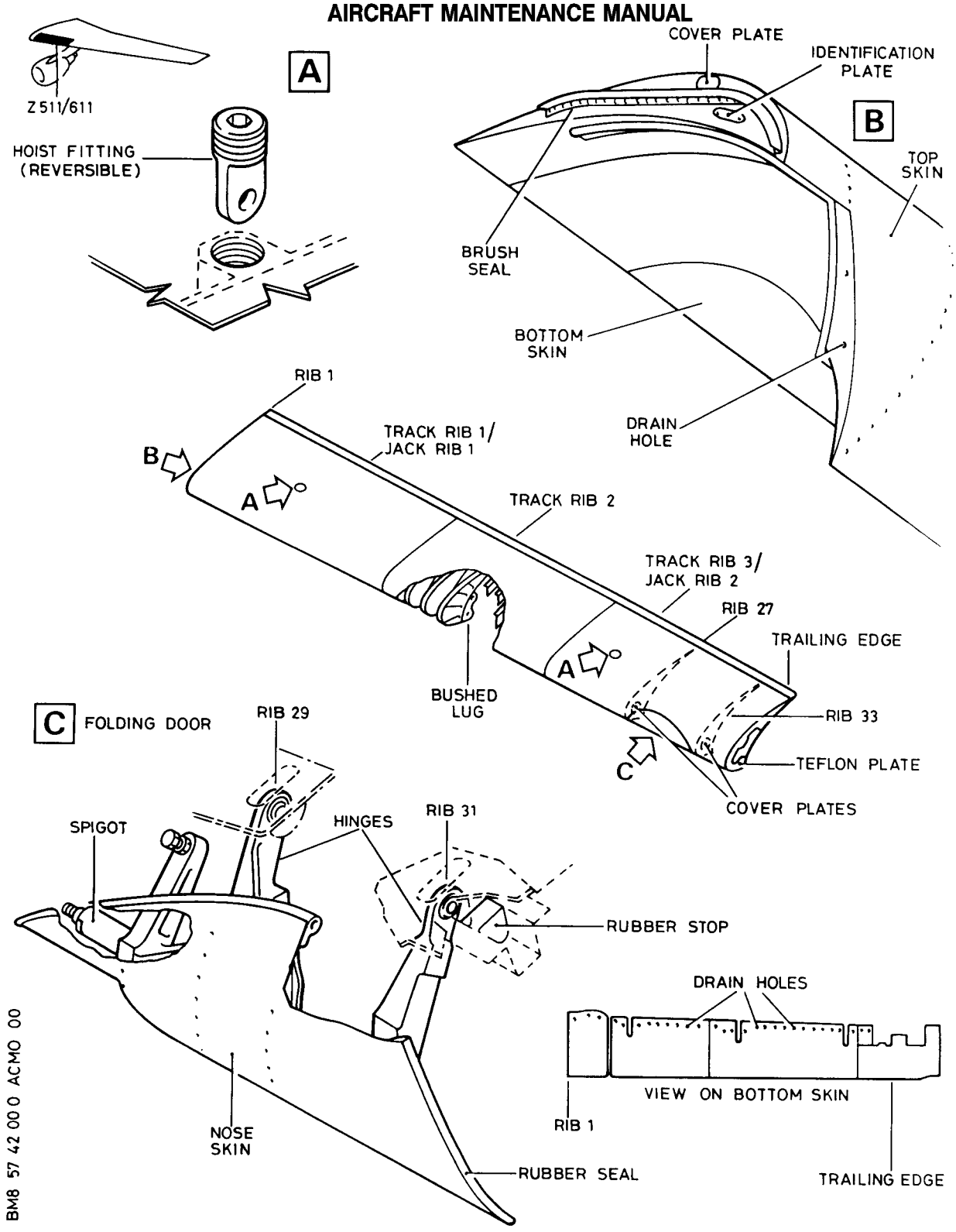
**ON A/C 001-003,

The folding door consists of a spigot and spigot bracket, a center rib and outboard rib riveted between an inner skin and a nose skin. Two hinge arms and two rubber seals are attached to the inner skin.

The slat has three cover plates, at rib 1, rib 27 and rib 33. An identification plate is riveted to rib 1. Rubber/fabric seals are attached to the rear skin around track and screw jack attachments and a



Slat 1
Figure 001



Slat 1
Figure 002

brush seal is mounted on rib 1.

Drain holes are provided along the length of the rear skin.

R **ON A/C 004-200,

The folding door assembly consists of a cast spigot which is riveted to a nose skin. Two hinges and two rubber seals are attached to the spigot.

The slat has three cover plates, at rib 1, rib 27 and rib 33. An identification plate is riveted to rib 1. Rubber/fabric seals are attached to the rear skin around track and screw jack attachments and a brush seal is mounted on rib 1.

Drain holes are provided along the length of the rear skin.

SLAT 2 - DESCRIPTION AND OPERATION

1. Description
(Ref. Fig. 001)

**ON A/C 001-001,

Slat 2 is of aluminum alloy, comprising a curved web front spar, track ribs, jack ribs and 55 conventional ribs and nose ribs with a riveted skin covering. An extruded section forms the trailing edge. Forward of the spar a perforated (piccolo) tube extends from rib 22 to rib 55, where a hose is provided for connection to Slat 3. Anti-icing hot air introduced into this tube is distributed through the nose area and transferred, via air passages provided along the upper flange of the spar, to exhaust holes in the back skin of the slat.

Track ribs and jack ribs are machined components having either a single or double bushed lug which protrudes from the skin. A standard NSA reversible hoist lug is installed at each jack rib for stowage or lifting.

R **ON A/C 002-200,

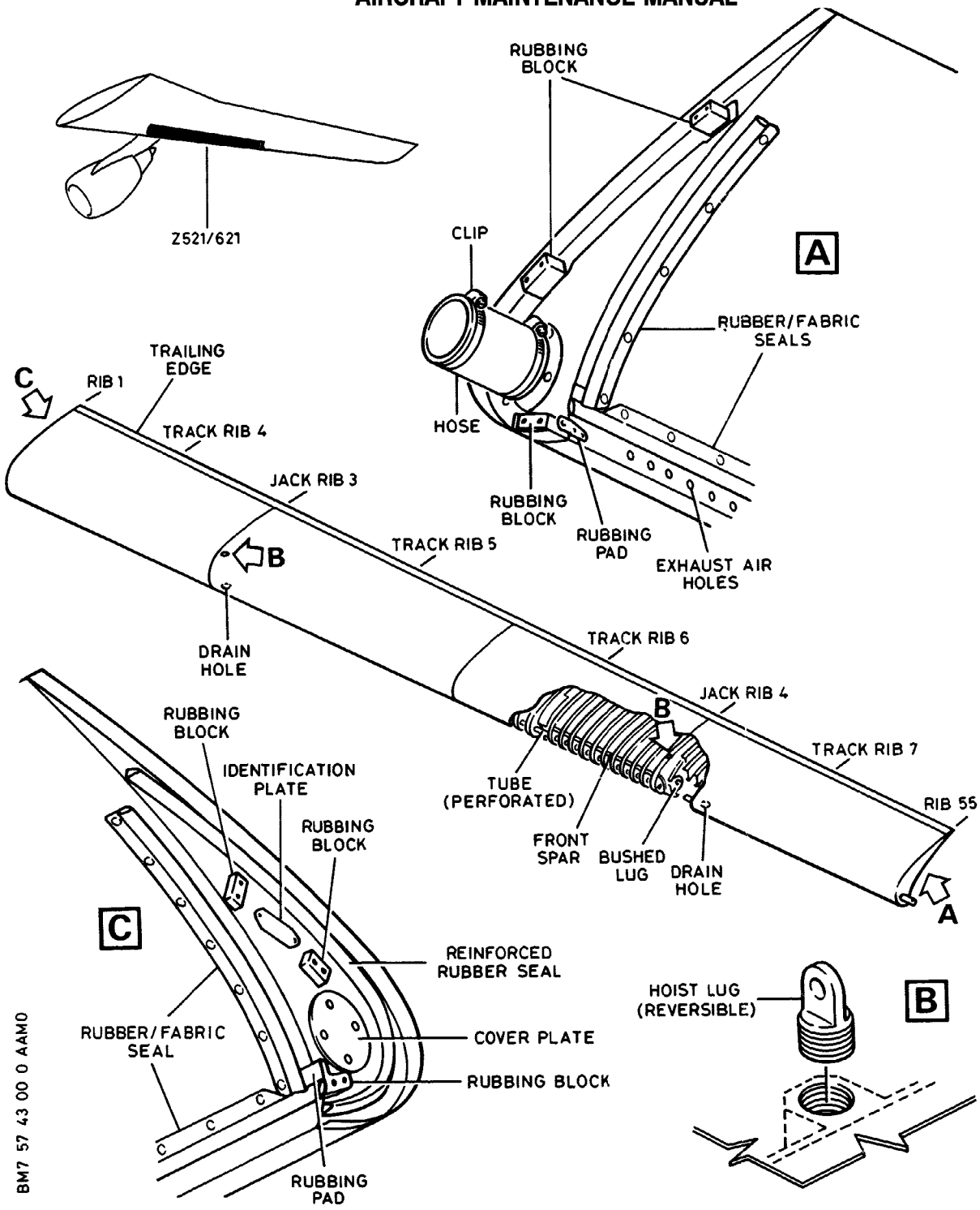
Slat 2 is of aluminum alloy, comprising a curved web front spar, track ribs, jack ribs and 55 conventional ribs and nose ribs with a riveted skin covering. An extruded section forms the trailing edge. Forward of the spar a perforated (piccolo) tube extends from rib 22 to rib 55, where a hose is provided for connection to Slat 3. Anti-icing hot air introduced into this tube is distributed through the nose area and transferred, via air passages provided along the upper flange of the spar, to exhaust holes in the back skin of the slat.

Track ribs and jack ribs are machined components having either a single or double bushed lug which protrudes from the skin. A plastic plug is installed at each jack rib. This can be removed and replaced with a standard NSA reversible hoist lug for lifting and storage.

**ON A/C ALL

An inspection cover plate, adjustable rubbing pad, reinforced rubber seal and three rubbing blocks are installed at rib 1. Rib 55 has one adjustable rubbing pad and three rubbing blocks.
Rubber/fabric aerodynamic seals are attached to the undersurface of the slat, above the exhaust air hole locations and around track and screwjack attachments.

Two moisture drainage holes are provided.



Slat 2
Figure 001

1. Description
(Ref. Fig. 001)

**ON A/C 001-001,

Slat 3 is of aluminum alloy, comprising a curved web front spar, track ribs, jack ribs and 52 conventional ribs and nose ribs covered by riveted skin. An extruded section forms the trailing edge and a tip-end skin continues the slat shape outboard of rib 52. Forward of the spar, a perforated (piccolo) tube, fitted with a tee-piece for connection to the aircraft, extends the length of the slat. Anti-icing hot air introduced into this tube is distributed through the nose area and transferred, via air passages provided along the upper flange of the spar, to exhaust holes in the back skin of the slat. Connection of the perforated tube to Slat 2 is by flexible hose.

The track ribs and jack ribs are machined components having either a single or double bushed lug which protrudes from the skin. A standard NSA reversible hoist lug is installed at each jack rib for lifting or stowage.

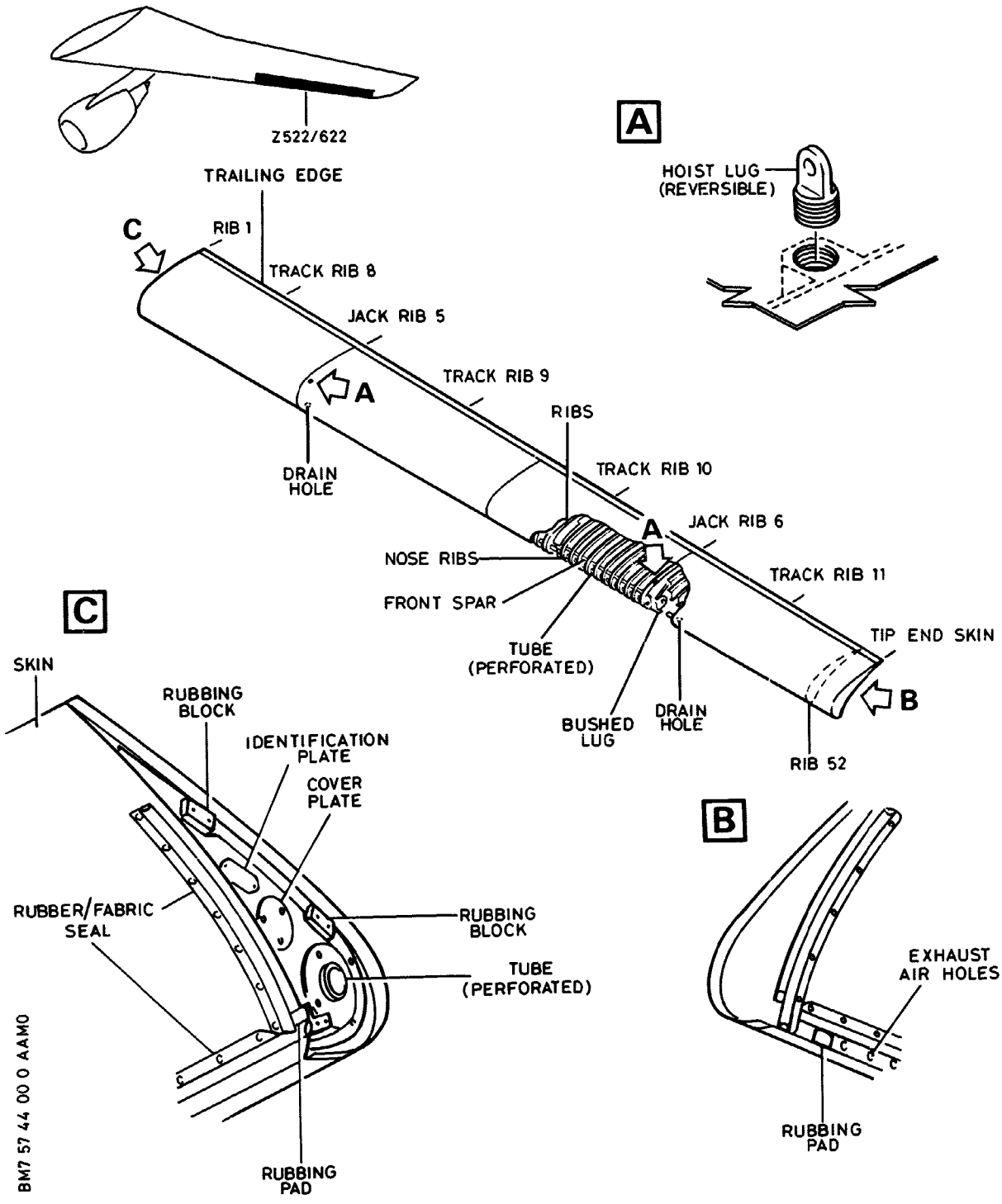
R **ON A/C 002-200,

Slat 3 is of aluminum alloy, comprising a curved web front spar, track ribs, jack ribs and 52 conventional ribs and nose ribs covered by riveted skin. An extruded section forms the trailing edge and a tip-end skin continues the slat shape outboard of rib 52. Forward of the spar, a perforated (piccolo) tube, fitted with a tee-piece for connection to the aircraft, extends the length of the slat. Anti-icing hot air introduced in this tube is distributed through the nose area and transferred, via air passages provided along the upper flange of the spar, to exhaust holes in the back of the slat. Connection of the perforated tube to Slat 2 is by flexible hose.

The track ribs and jack ribs are machined components having either a single or double bushed lug which protrudes from the skin. A plastic plug is installed at each jack rib. This can be removed and replaced with a standard NSA reversible hoist lug for lifting and storage.

**ON A/C ALL

An inspection cover plate, three rubbing-blocks and an identification plate are installed at rib 1. Two adjustable rubbing-pads are also installed: one at rib 1 and one at rib 52.
Rubber/fabric aerodynamic seals are attached to the undersurface of the slat, above the exhaust air hole locations and around track and screwjack attachments.



Slat 3
Figure 001

Two moisture drainage holes are provided.

KRUEGER FLAP - DESCRIPTION AND OPERATION

1. General
(Ref. Fig. 001)

**ON A/C 001-001,

1. General

The Krueger flap and mechanism in each wing is contained in a box structure located in the leading edge between the wing/fuselage fillet and inboard end of slat 1. The box structure is attached to the fuselage by two failsafe rods at its inboard leading edge, and to the forward face of the wing box front spar by four brackets. The complete structure is removable. Two reversible hoist lugs are provided in the upper skin of the box for the attachment of a lifting sling.

2. Description

R **ON A/C 002-200,

1. General

The Krueger flap and mechanism in each wing is contained in a box structure located in the leading edge between the wing/fuselage fillet and inboard end of slat 1. The box structure is attached to the fuselage by two failsafe rods at its inboard leading edge, and to the forward face of the wing box front spar by four brackets. The complete structure is removable. Plastic plugs are installed in two positions in the upper face of the flap box. These can be removed and replaced with standard NSA reversible hoist lugs for lifting and storage.

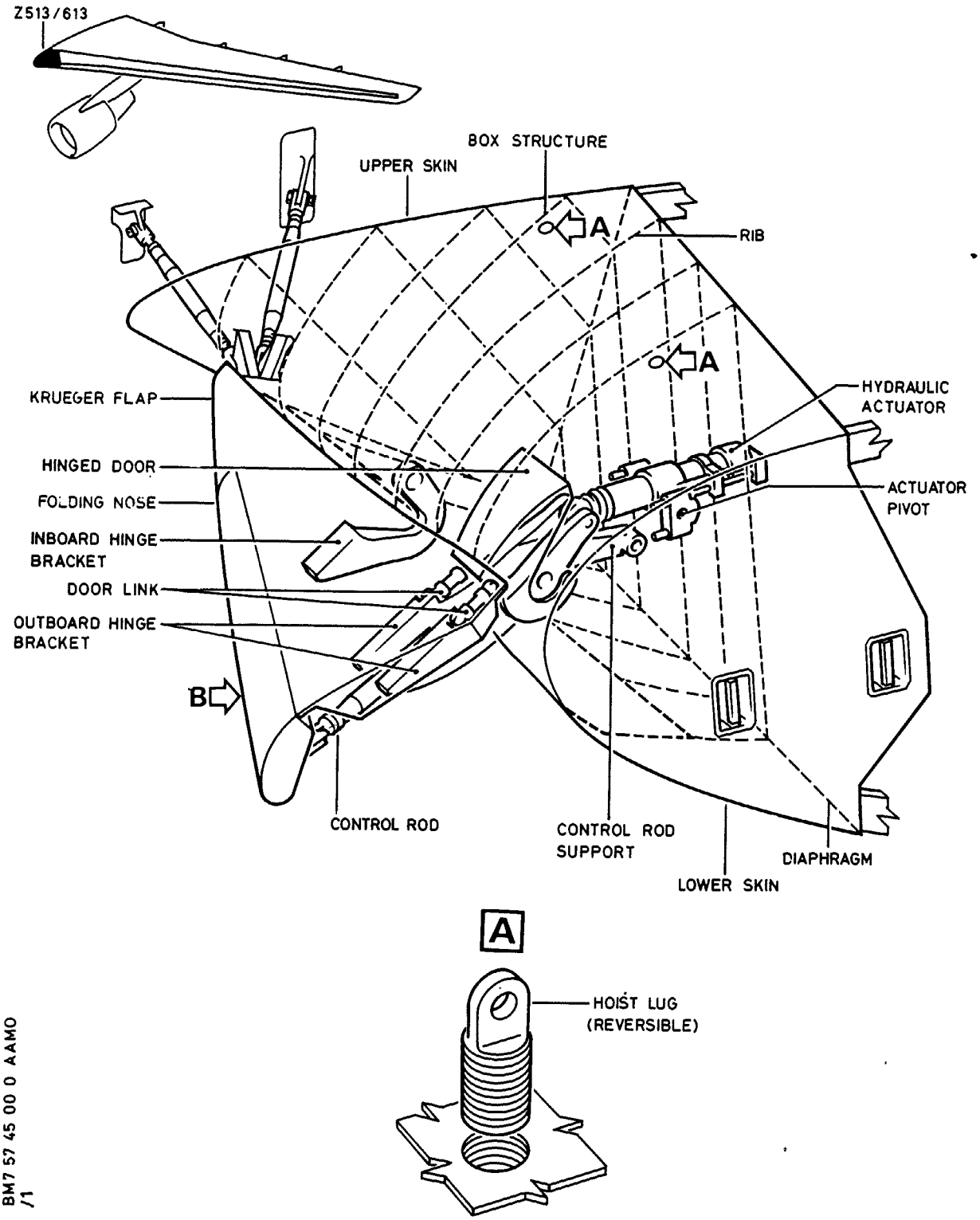
2. Description

**ON A/C ALL

(Ref. Fig. 002)
The Krueger flap is of aluminum alloy construction and comprises a main body with a hinged folding nose over most of the span. The main body is a tapered box structure comprising a front and rear spar, an outboard end rib and eight intermediate ribs; the box is covered by inner and outer skins. The inboard leading edge is completed by a rubber molding.

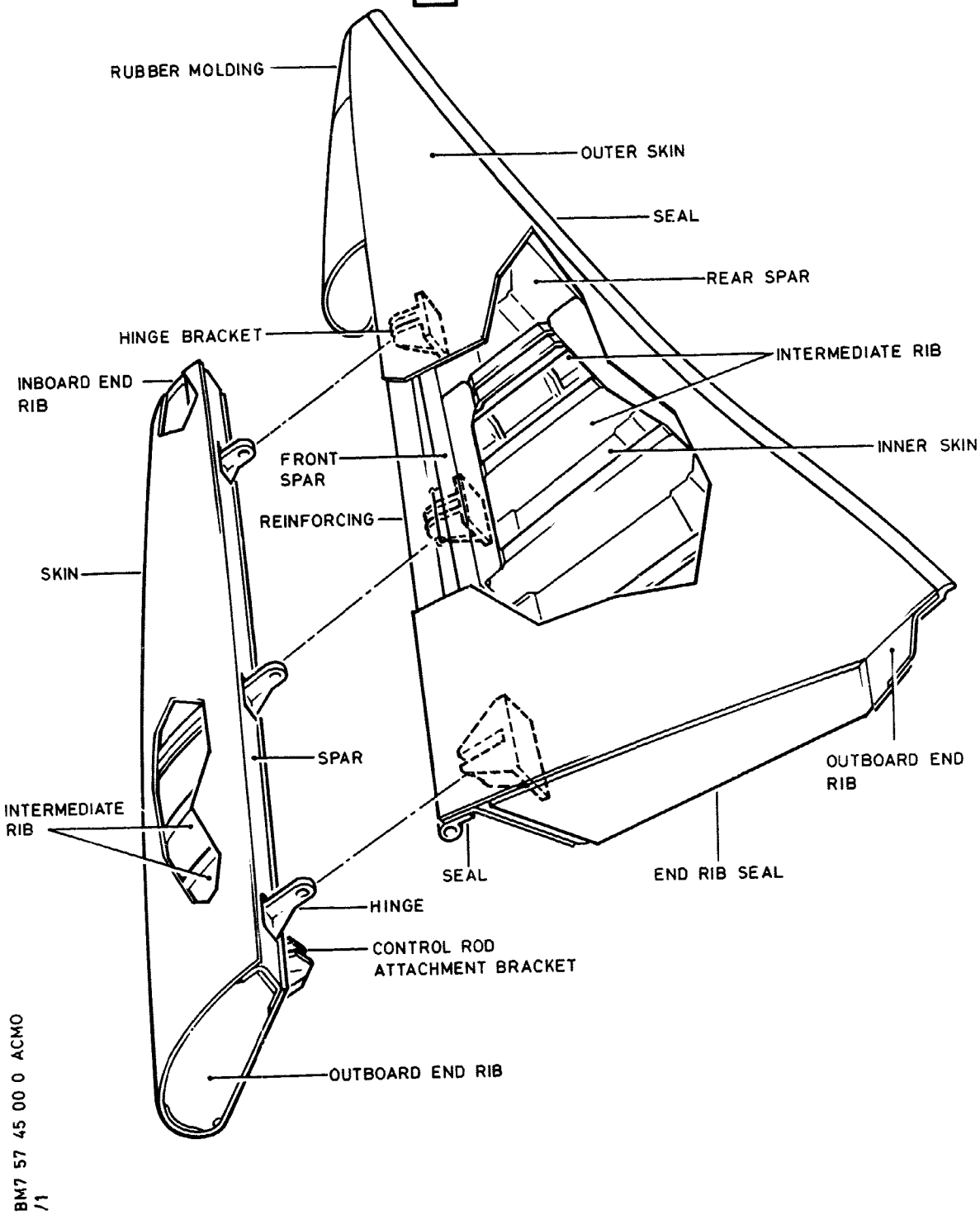
Two machined hinged brackets are provided, for attachment to the aircraft, the outboard hinge bracket also provides attachment for mechanical linkage and an actuator.

Three machined hinge brackets mounted on the front spar of the flap provide attachment for the folding nose.



Krueger Flap
Figure 001

B



Krueger Flap - Details
Figure 002

Sealing strips are installed on the leading and trailing edge skins and a flat rubber seal is bonded to the outboard end rib.

The folding nose is a tapered box structure comprising end ribs, intermediate ribs and a rear spar; the box is completed by a single-piece skin. Three hinge brackets are provided for attachment to the flap main body. A machined bracket provides attachment for a control rod.

3. Operation

Operation of the Krueger flap is by hydraulic actuator and mechanical linkage (Ref. 27-80-00).

KRUEGER FLAP AND BOX-STRUCTURE COMPLETE - REMOVAL/INSTALLATION

WARNING : LANDING GEAR - MAKE CERTAIN GROUND SAFETIES AND CHOCKS ARE IN POSITION.

FLIGHT CONTROL SURFACES - MAKE CERTAIN TRAVEL RANGE IS CLEAR.

HYDRAULICS - BEFORE PRESSURIZING MAKE CERTAIN CONTROLS MATCH SURFACE POSITION.

BEFORE POWER IS SUPPLIED TO AIRCRAFT MAKE CERTAIN THAT ELECTRICAL CIRCUITS UPON WHICH WORK IS IN PROGRESS ARE ISOLATED.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Warning Notices Prohibiting Operation of Flap/ Slat Systems.
B. 98A27808011000	Pin-Rigging, Krueger Flap
C.	Torque Wrenches, Capable of : 2.9 to 3.8 lbf.ft (0.4 to 0.5 m.daN) 14.4 to 16.3 lbf.ft (1.95 to 2.2 m.daN) 22.8 to 26.6 lbf.ft (3.1 to 3.6 m.daN)
D.	Blanking Caps
E.	Cotter-Pins
F.	Circuit Breaker Safety Clips and Tags
G.	Access Platform 13 ft (4 m)
R H. 98F27508498000	Hoist R/I Flap/Slat
J. Material No. 04-004	Common Greases (Ref. 20-31-00)
K. Material No. 05-005	Special Materials (Ref. 20-31-00)
L. Material No. 09-013	Sealants (Ref. 20-31-00)
M. Material No. 09-016	Sealants (Ref. 20-31-00)
Referenced Procedures	
- 20-28-11, P. Block 1	Electrical Bonding
- 24-41-00, P. Block 301	AC External Power Control
- 27-80-00, P. Block 301	Lift Augmenting
- 27-88-11, P. Block 401	Krueger Flap Actuator
- 29-10-00, P. Block 301	Main Hydraulic Power

2. Procedure (Ref. Fig. 401, 402, 403)

A. Job Set-Up
(1)Extend Krueger flaps (Ref.27-80-00, P. Block 301).
(2)Display warning notices.
(3)Depressurize hydraulic system (Ref.29-10-00, P. Block 301).
(4)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
133VU	FLT CTL/KRUGER	45CV	333/T61
133VU	FLT CTL/SFCC NORM SUPPLY/SLATS/ SYS 1	7CV	333/T63
133VU	FLT CTL/SFCC NORM SUPPLY/SLATS/ SYS 2	8CV	333/T64
133VU	FLT CTL/FLAPS & SLATS/POS/IND	1CN	334/S66
133VU	FLT CTL/SLATS 26 VAC/SYS 2	4CV	335/R64
133VU	FLT CTL/SLATS 26 VAC/SYS 1	3CV	335/R65
133VU	FLT CTL/SFCC LAND RECOVERY/ SUPPLY/SLATS SYS 1	9CV	335/R66
133VU	FLT CTL/SLATS WTB2	14CV	336/Q64
133VU	FLT CTL/SLATS WTB1	13CV	336/Q65

(5)Position access platform.
(6)Install rigging pin through both rib 2B and outboard bracket (Krueger flap fully extended).
(7)Remove fillet fairing strips 513(613)HL, JL and KL. Open panels 513(613)GL and RL.
(8)Remove nine nuts (16), spacers (15) and screws (14) along rear edge of top panel 513(613)QL, and 30 screws around remaining three sides of panel. Collect spacers. Ease panel forward to disengage rear edge (Ref.Detail D).

B. Removal
(1)Remove hydraulic lines cover assembly on Krueger box diaphragm. Position container and disconnect hydraulic lines 276G231 and 276G241. Install blanking caps on line ends.
(2)Disconnect microswitch connectors 47CV(46CV) and 49CV(48CV) at rib 2A:
(a)Remove nuts (27), washers (26) and screws (25) to detach connectors from supports.
(b)Remove screws (31) and washers (30) securing seal (28) and cover (29) to diaphragm.
(c)Remove bolts (22), washers (21), clips (23) and spacers (24) securing wires to inside and outside of Krueger box and diaphragm.
(d)Remove wires and connectors from box assembly, loop wires and secure in a protective plastic bag.
(3)Disconnect bonding leads at Krueger box inboard end rib (2 positions), outboard end rib (2 positions), inboard top member (2 positions) and inboard bottom member position at front spar.
R (4)Reverse the hoisting eyes and attach the hoist PN 98F27508498000. Take
R the weight of the Krueger box on the hoist - approximate weight is
R 250 kg (550 lb).
(5)Remove Krueger box inboard top member (Details A, B):
(a)Remove cotter-pin (4), nut (3), washer (2) and bolt (1).
(b)Remove cotter-pin (5), nut (6), washer (7) and bolt (8). Remove member.
(6)Remove cotter-pin (9), nut (10), washer (11) and bolt (13) securing

inboard bottom member (Detail C). Collect washers (12) located between fork-end and record thickness and position.

(7)Remove outboard top member (Details E, F):

(a)Remove nuts (34) and bolts (33) at aft position.

(b)Remove bolts (32) at forward position. Remove member.

(8)Remove nuts (36) and bolts (35) at outboard bottom member aft position only (Detail G).

(9)Remove cotter-pin (53), nut (52), washer (51) and bolt (50 and 54) at each inboard end rib link rod (Detail K).

(10)Remove bolts (48) and angles (47) at outboard end rib attachment fittings (Details H and J). Clean sealant from nuts and pin heads, at each attachment fitting, remove cotter-pin (46), nut (45), special washer (44), pin (42) and extract bush (43 and 49). Note position of bush in respective fitting.

(11)Lower inboard end of Krueger box, remove from wing attachment fittings and lower box onto trestles.

R (12)If applicable, remove the hoist PN98F27508498000 and reverse the
R hoisting eyes.

(13)If necessary to retract Krueger flap and folding nose assembly:

(a)Remove panel 513(613)NL.

(b)Disconnect hydraulic actuator piston rod eye-end from outboard bracket (Ref.27-88-11, P. Block 401), and tape actuator to box structure clear of outboard bracket.

(c)Reinstall actuator axle, nut and washer in outboard bracket to prevent loss.

(d)Remove rigging pin and manually retract Krueger flap assembly. Secure with a strap around box assembly, to avoid accidental extension, and attach warning notice advising that actuator is disconnected.

(e)Reinstall panel 513(613)NL.

C. Preparation of Replacement Component

(1)If required, transfer seals and attachment fittings to replacement component.

R (2)Reverse the hoisting eyes and attach the hoist PN98F27508498000.

D. Installation

(1)If Krueger flap assembly has been retracted:

(a)Remove securing strap, manually extend flap and folding nose assembly fully, and install rigging pin through both rib 2B and outboard bracket.

(b)Remove panel 513(613)NL. Remove axle from outboard bracket, remove tape and connect actuator to outboard bracket (Ref.27-88-11, P. Block 401).

(c)Install panel 513(613)NL.

(2)Hoist Krueger box assembly with inboard end lower than outboard end, position wing lugs in outboard end rib attachment fittings. Hoist inboard end to mate with link rods.

(3)Secure outboard end rib attachment fittings (Details H, J):

(a)Lubricate bushes (43, 49) with Material No.04-004. Install bushes in positions noted during removal.

(b)Lubricate pins (42) with Material No.04-004. Install pins with

special washers (44) and nuts (45). TORQUE nuts to between 22.8 and 26.6 lbf.ft (3.1 and 3.6 m.daN). Safety with cotter-pin (46).
(c)Apply Material No.05-005 to unpainted cadmium surfaces.
(d)Apply Material No.09-013 around heads of pins and nuts.
(4)Install angles (47) and secure with bolts (48). TORQUE bolts to between 2.9 and 3.8 lbf.ft (0.4 and 0.5 m.daN).

CAUTION : LINK RODS ARE JIG SET. DO NOT ADJUST LENGTH.

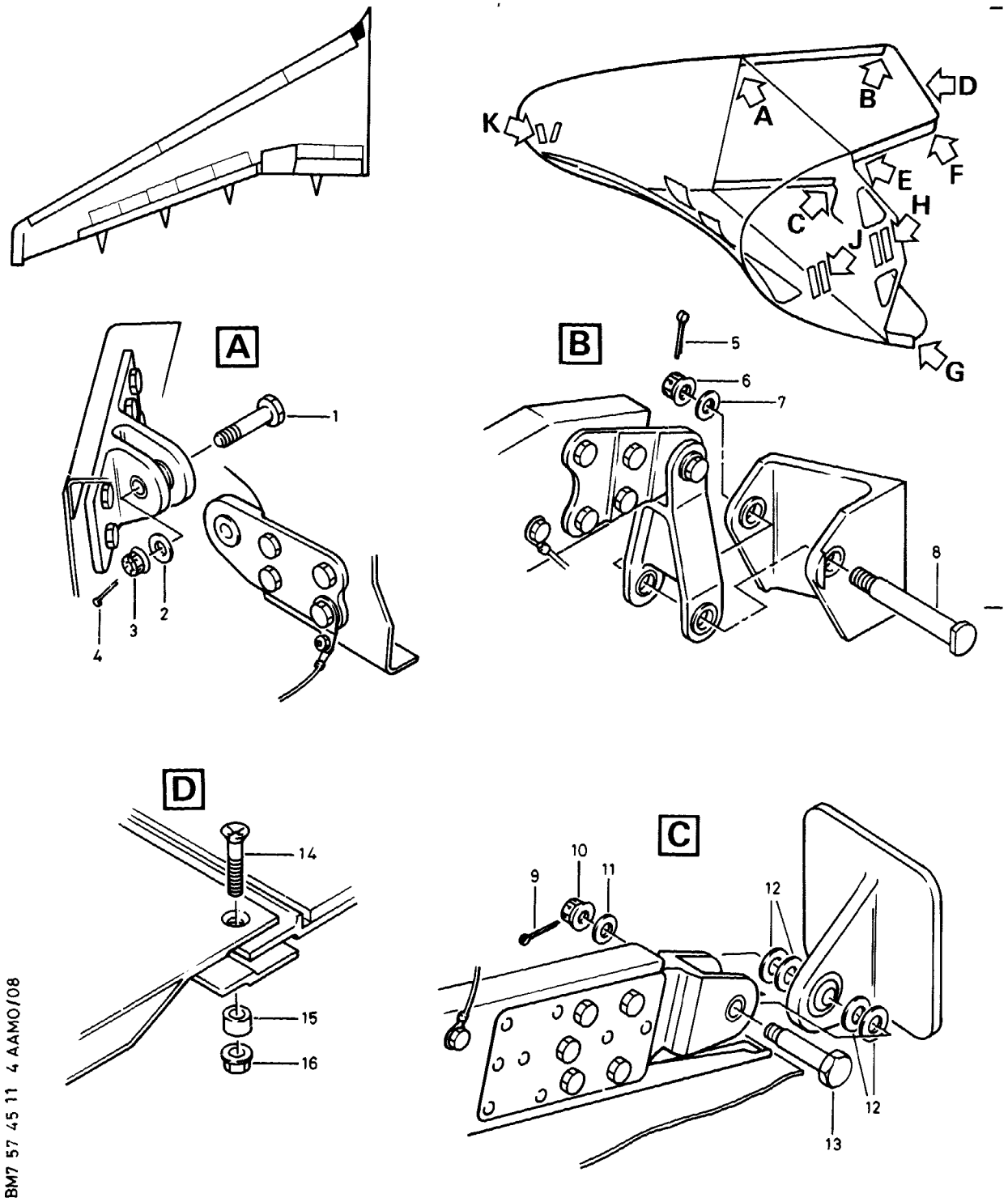
(5)Secure link rods to attachment fittings on Krueger box inboard end rib (Detail K). Lubricate bolts (50 and 54) with Material No.04-004 and install bolts, washers (51) and nuts (52). TORQUE nuts to between 14.4 and 16.3 lbf.ft (1.95 and 2.2 m.daN). Safety with cotter-pins (53).
(6)Secure outboard top member (Details E, F):
(a)Install bolts (32) at forward position. TORQUE bolts to between 2.9 and 3.8 lbf.ft (0.4 and 0.5 m.daN).
(b)Install bolts (33) and nuts (34) at aft position.
(7)Secure angle to bracket on leading edge end rib at outboard bottom member aft position with bolts (35) and nuts (36) (Detail G).
(8)Secure inboard bottom member (Detail C):
(a)Lubricate washers (12) with Material No.04-004, interpose washers between fork-end of member and front spar lug, in position and thickness noted during removal, maximum clearance after setting 0.02 in (0.4 mm).
(b)Lubricate bolt (13) with Material No.04-004, install bolt, washer (22) and nut (10). Tighten nut and safety with cotter-pin (9).
(9)Secure inboard top member (Details A, B):
(a)Lubricate bolt (1) with Material No.04-004. Install bolt, washer (2) and nut (3) at forward position. Tighten nut and safety with cotter-pin (4).
(b)Lubricate bolt (8) with Material No.04-004. Install bolt, washer (7) and nut (6) at aft position. Tighten nut and safety with cotter-pin (5).
(10)Connect bonding leads (Ref.20-28-11, P. Block 1), at Krueger box inboard end rib (2 positions), outboard end rib (2 positions), inboard top member (2 positions) and inboard bottom member at front spar.
(11)Insert microswitch connectors and wires through hole in Krueger box diaphragm. Secure wires to inside and outside of Krueger box and diaphragm with clips (23), spacers (24), washers (21) and bolts (22). Install seal (28) and cover plate (29) on diaphragm with washers (30) and screws (31). Install connectors 47CV(46CV) and 49CV(48CV) to supports with screws (25), washers (26) and nuts (27). Connect micro-switches to respective connectors.
(12)Remove blanking caps and connect hydraulic lines 276G231 and 276G241 to unions on diaphragm. Install cover assembly over hydraulic lines.
(13)Install top panel 513(613)QL (Detail D), secure aft edge with nine spacers (15), screws (14) and nuts (16). Secure the remaining three sides with 30 screws.
(14)Install fillet fairing strips 513(613)HL, JL, KL and close panel 513(613)GL.
(15)Remove rigging pin from outboard bracket and rib 2B.

E. Preparation for Test
(1)Make certain that rigging pin has been removed and that Krueger flap will be unobstructed during operation.
R (2)Remove the hoist PN98F27508498000 and reverse the hoisting eyes.
(2)On panel 133VU, remove safety clips and tags and close circuit breakers 45CV, 7CV, 8CV, 1CN, 4CV, 3CV, 9CV, 14CV and 13CV.
(3)Pressurize Green hydraulic system (Ref. 29-10-00, P. Block 301).

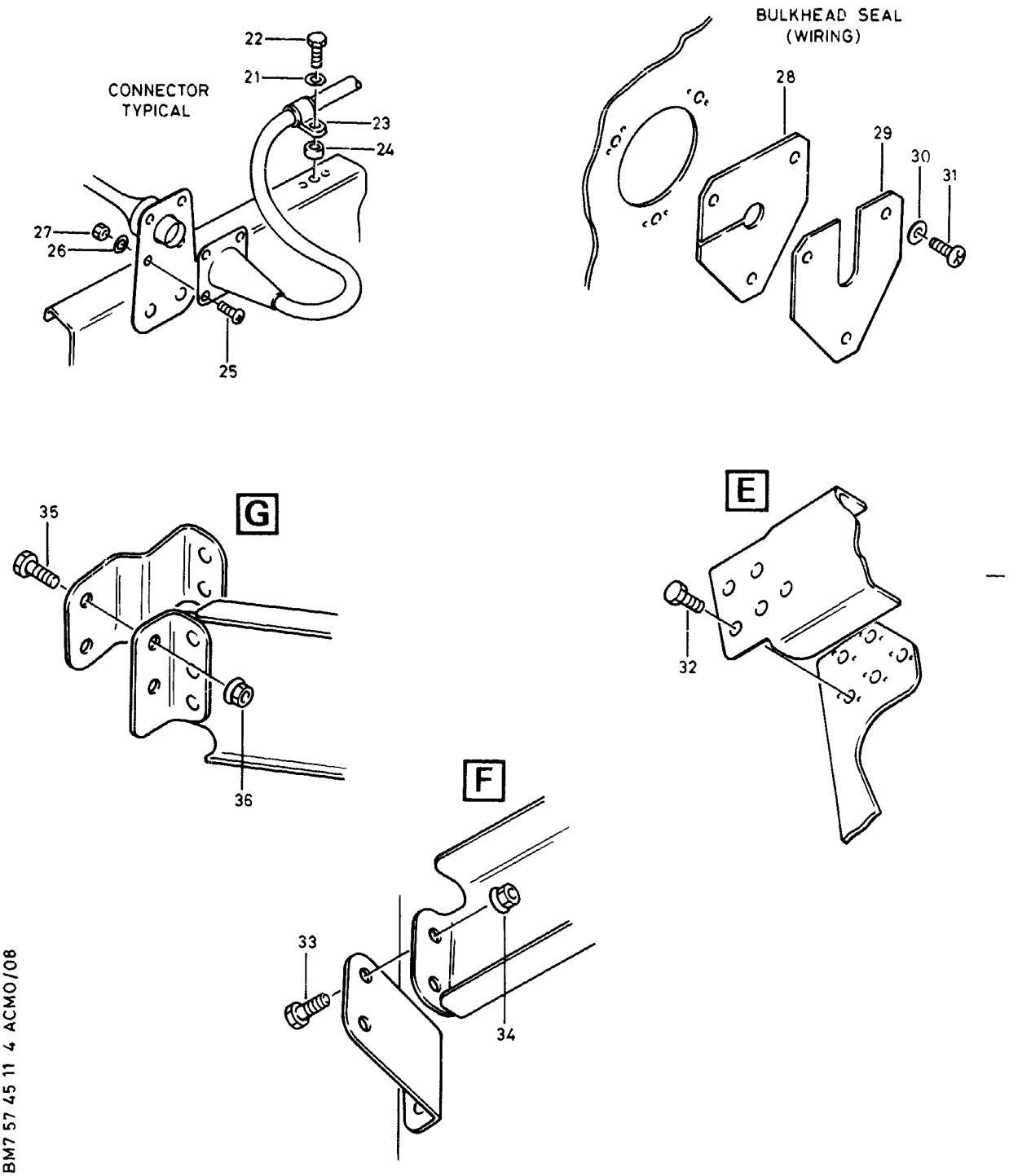
F. Test
(1)Perform the following:

ACTION	RESULT
Fully retract Krueger flap (Ref.27-80-00, P. Block 301)	- Krueger flap and slats retract - On Slat Flap Position Indicator (SFPI) panel 4VU, KRUGER light is out
Fully extend Krueger flap (Ref.27-80-00, P. Block 301)	- Krueger flap and slats extend - On SFPI KRUGER light is out NOTE : On SFPI KRUGER light comes on amber if either Krueger flap is not in correct position 10 secs after a movement. Illumination of light activates ECAM
Operate Krueger flaps several times and inspect hydraulic unions at Krueger box diaphragm interface for leaks	- No hydraulic leaks are permissible

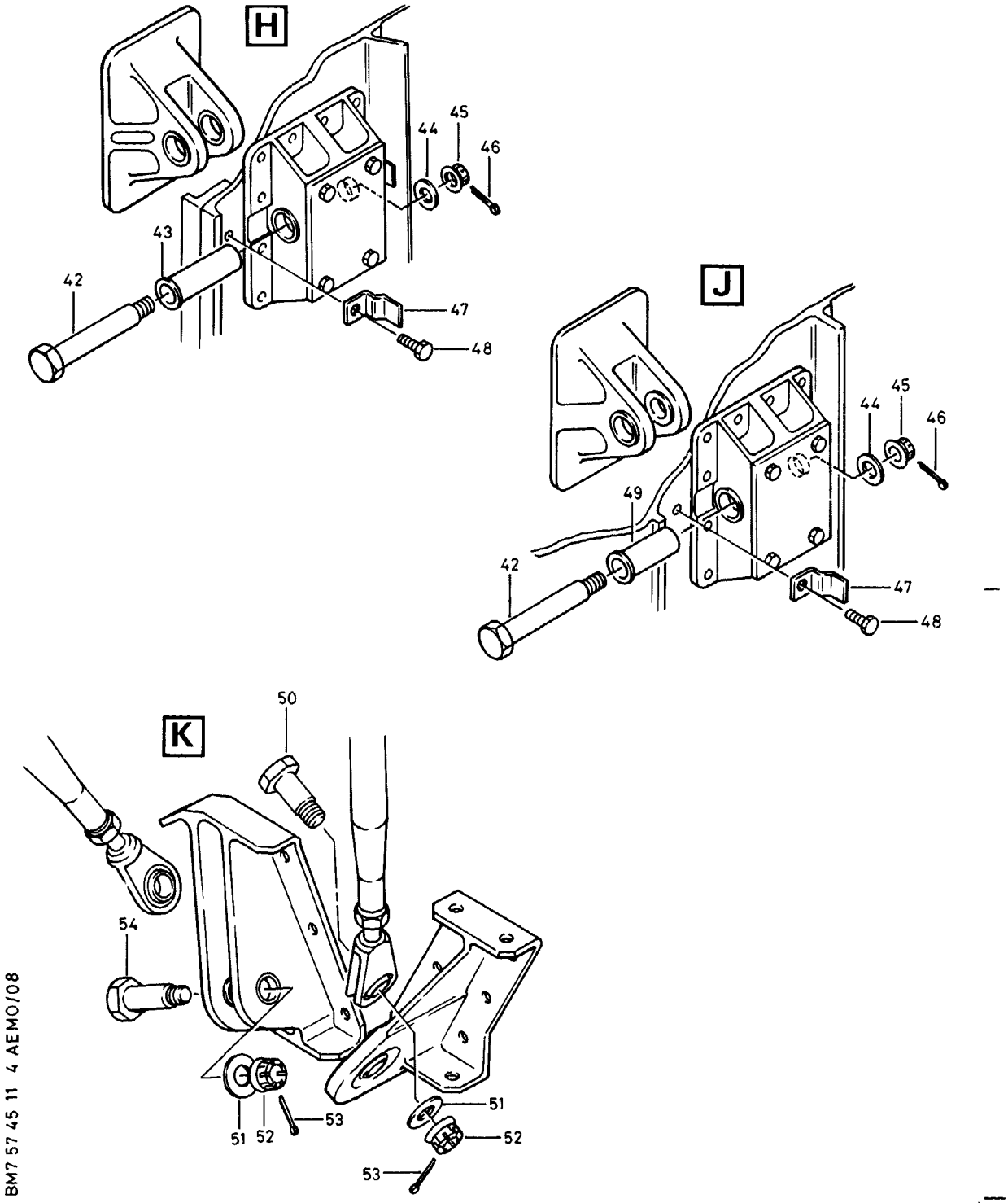
G. Close Up
(1)Depressurize hydraulic system (Ref. 29-10-00, P. Block 301).
(2)Close panel 513(613)RL.
(3)Remove all ground handling and maintenance equipment, standard/special tools, together with ground power and replenishing equipment.
(Ref. Fig. 401)
(Ref. Fig. 402)
(Ref. Fig. 403)



Krueger Box - Installation
Figure 401



Krueger Box - Connectors and Attachments
Figure 402



Krueger Box - Wing and Fuselage Attachments
Figure 403

TRAILING EDGE AND TRAILING EDGE DEVICES
DESCRIPTION AND OPERATION

1. General

A. Trailing Edge Structure

The trailing edge fixed structure extends from the wing rear spar to the leading edge of the various control surfaces, except, outboard of the outer flap where it extends fully aft. Access panels are provided in the lower surface skins, and the top skins are mostly extensions of the main wing box skins.

B. Trailing Edge Control Surfaces

(Ref. Fig. 001)

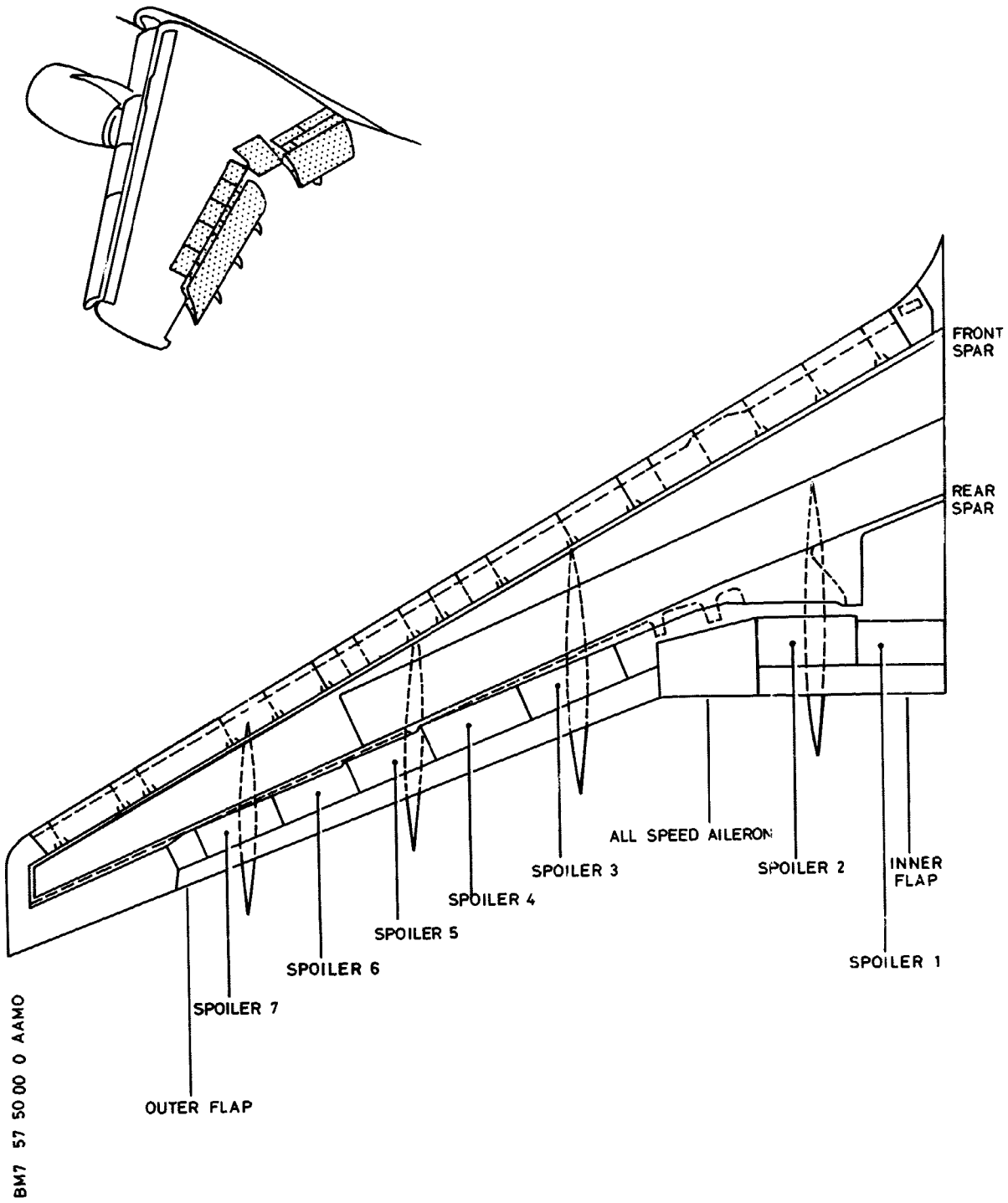
The trailing edge control surfaces comprise inner and outer flaps, aileron and seven spoilers on each wing. The inner flaps incorporate a spring-actuated flap vane system.

Both the inner and outer flaps are supported by roller carriages which run on flap track beams. The carriages are operated by ball screwjacks (2 per flap) which are mounted alongside the track beams, the flap rotation being controlled by the shape of the tracks. Flap track beam No.1 is attached to the fuselage and track beams 2, 3, 4 and 5 are attached to the underside of the wing.

To ensure a clean aerodynamic surface the flap track beams are provided with fairings except track No.1 which is covered by the wing-fuselage fairing. The fairings comprise a fixed forward portion attached to the wing and a hinged aft portion which is driven by links attached to the flap carriage. The body of the fairings are fabricated in Kevlar with metal support brackets.

The aileron is located at the rear of the engine between the inner and outer flaps and is hinged to the fixed trailing edge structure.

Spoilers 1 and 2 are located forward of the inner flaps and spoilers 3, 4, 5, 6 and 7 are located forward of the outer flaps. The spoilers are hinged to the fixed trailing edge structure and, when retracted, form the upper shroud for the flaps.



Trailing Edge and Trailing Edge Devices
Figure 001

TRAILING EDGE - DESCRIPTION AND OPERATION

1. General

(Ref. Fig. 001)

The fixed trailing-edge structure aft of the rear spar is of aluminum alloy, and provides the mountings and hinge attachments for the trailing-edge control surfaces and their operating mechanisms. The structure also provides support and the aft attachment for the main landing gear.

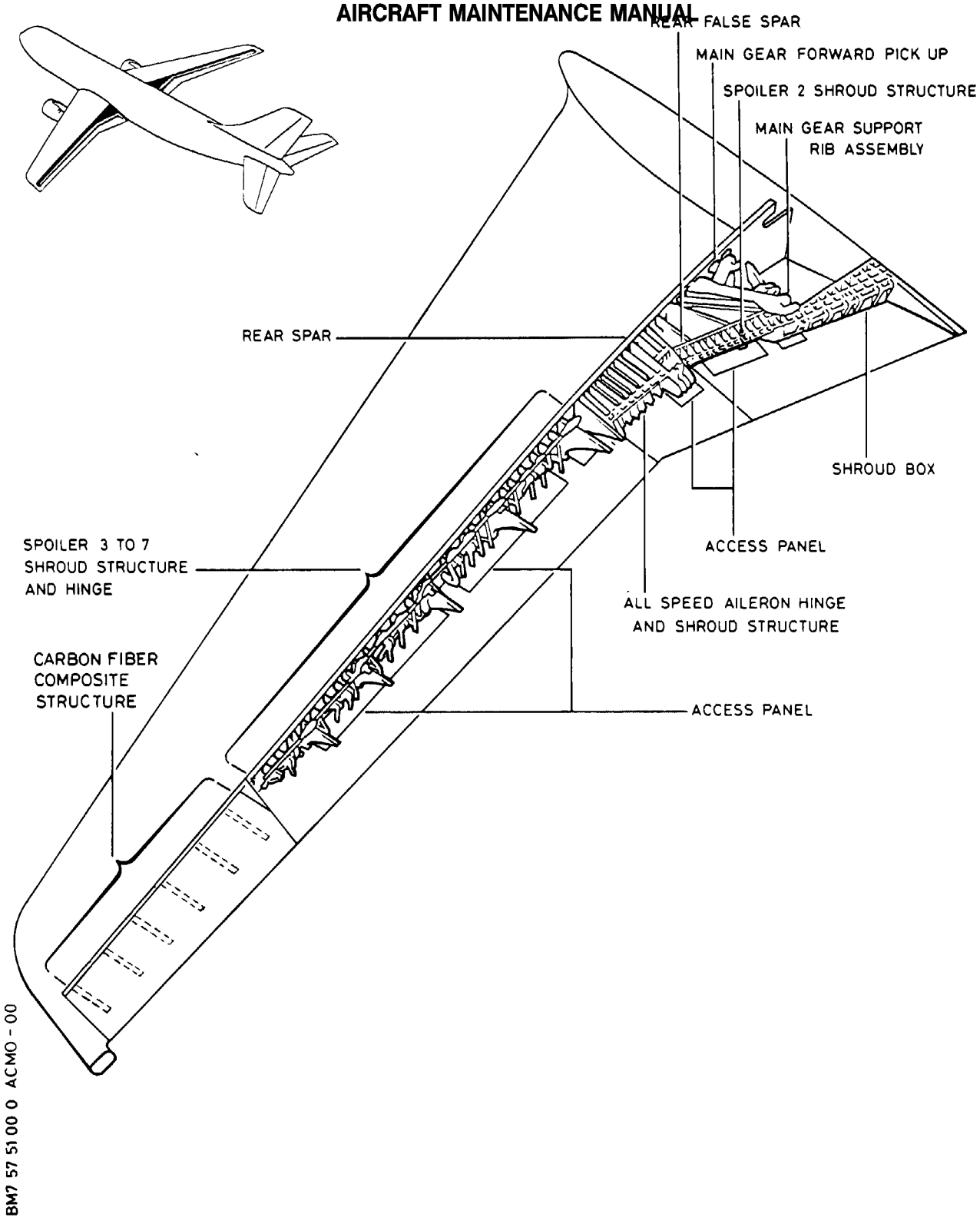
The skins are mainly extensions of the main wing box skins except outboard of the spoilers and inboard of rib 4. The skins extend aft to the leading edge of the control surfaces and aft of the main landing gear support structure. Access panels are provided in the bottom skin, extending over the inboard flap, aileron and outboard flap. The panels are attached with quick-release fasteners, and at the aileron and outboard flap positions are hinged at the forward edge. The edge members at the rear of these panels carry the seals which rest on the aileron and the flaps when retracted.
Outboard of the spoilers the trailing edge is of carbon composite structure consisting of honeycomb sandwich skins with I section ribs and metal diverter strips. There is a removeable panel in the bottom surface.
The internal structure over the length of the outboard flap and aileron consists of machined riblets which provide the following:-

1. Support for the top skin and the bottom hinged panels.
2. Support for the systems including the flap drive shaft.
3. Transfer vertical loads from the flap beams (tracks 3, 4 and 5) into the rear spar.
4. Mountings for the flap uplock rollers.

The riblets between spoiler surfaces 3 to 7 are double, forming box ribs. The lugs for these spoiler hinges are machined integrally with the riblets, and the riblets at the ends of the spoilers carry the stops on to which the surfaces are pulled when retracted.

The structure between the end of the aileron and the landing gear pick-up rib comprises machined ribs and a machined false rear spar, forming a box structure. The top and bottom skins are extensions of the main wing box skins, and in the top skin an access door gives access to flight control units. Aft of the false spar are machined hinge and actuator fittings, terminating in a rear sub spar, which carry spoiler 2.

Between the landing gear pick-up rib and the side of the fuselage there is a separate shroud box structure comprising integrally machined riblets, sheet metal pressed riblets, top and bottom machined skins and a fabricated sheet metal front spar. The machined riblets carry the hinges and actuator for spoiler 1 and the front


REAR FALSE SPAR
MAIN GEAR FORWARD PICK UP
SPOILER 2 SHROUD STRUCTURE
MAIN GEAR SUPPORT RIB ASSEMBLY
REAR SPAR
SHROUD BOX
ACCESS PANEL
SPOILER 3 TO 7 SHROUD STRUCTURE AND HINGE
ALL SPEED AILERON HINGE AND SHROUD STRUCTURE
CARBON FIBER COMPOSITE STRUCTURE
ACCESS PANEL
BM7 57 51 00 0 ACMO - 00

Trailing Edge Structure
Figure 001

spar of the box forms the rear wall of the main landing gear leg bay.

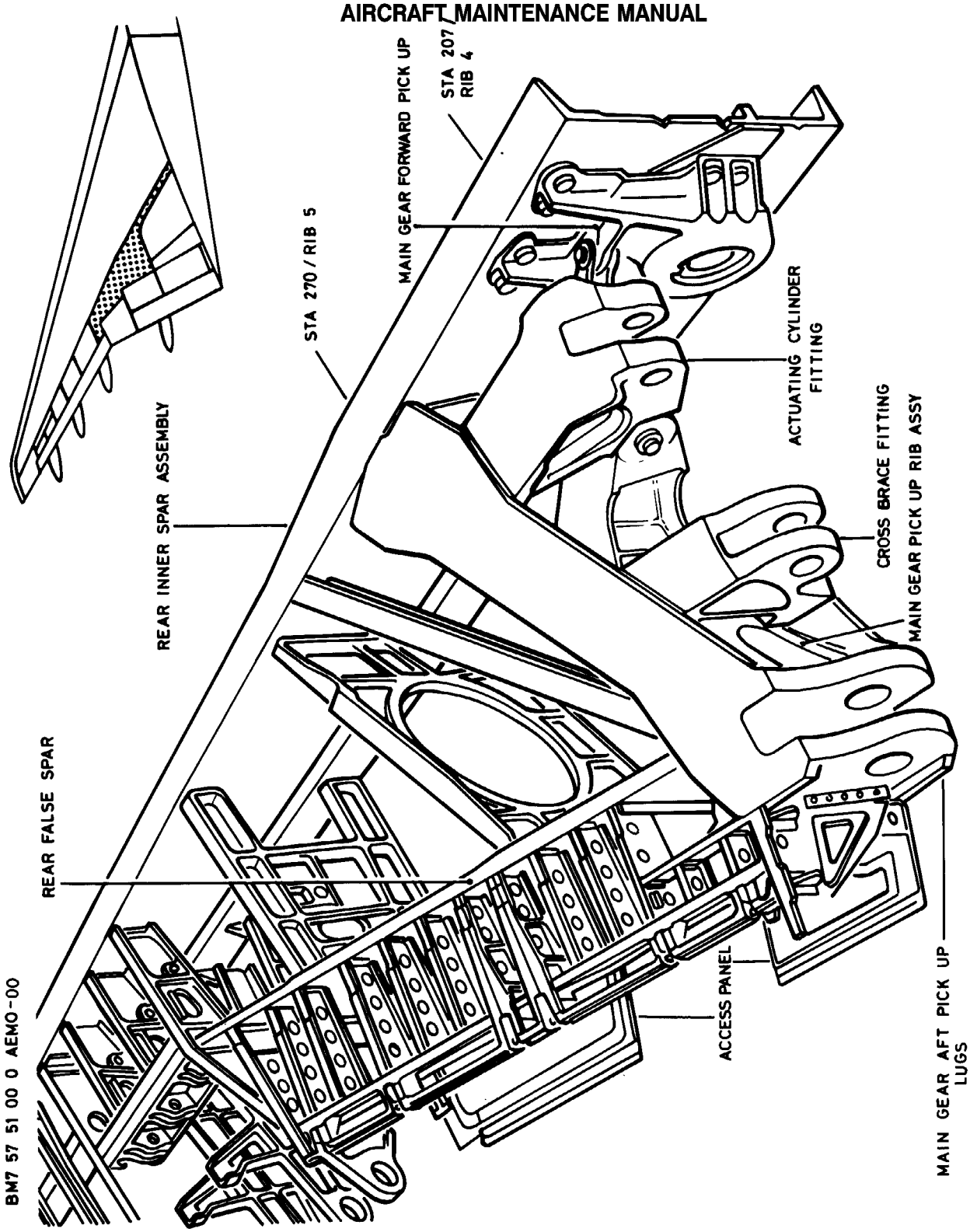
The outboard end of the shroud structure is hinged to the main wing box skin extension and the inboard end is attached by links at the fuselage.

Forward of the shroud box are two access panels, one above and one below and forward of the main gear. These panels are glass fiber with Nomex honeycomb cores. The top panel is supported on fabricated aluminum alloy beams which are hinged at their outboard ends to the wing box skin extension and attached at their inner ends with links at the fuselage.

2. Main Landing Gear

(Ref. Fig. 002)

The forward main gear attachment is by means of a spigot which is free to slide in a spherical bearing. The bearing is located in a titanium forging which is mounted on the aft face of the rear spar at wing rib 4. The main gear pick-up rib forging mounted on the aft face of the rear spar at wing rib 5 supports the main gear aft attachment. The pick-up rib also carries the fittings to which the retraction jack, reaction rod and actuating cylinder are attached. In addition the actuating cylinder fitting is attached by a link to the rear spar at rib 4.



Main Landing Gear Attachment Fittings.
Figure 002

1. Aileron Brush Seal - Replacement

WARNING: BEFORE PROCEEDING WITH MAINTENANCE WORK ON OR NEAR MECHANICAL FLIGHT CONTROLS OR PRIMARY FLIGHT CONTROL SURFACES, LANDING GEARS, ASSOCIATED DOORS OR ANY MOVING COMPONENT, MAKE CERTAIN THAT GROUND SAFETIES AND/OR WARNING NOTICES ARE IN CORRECT POSITION TO PREVENT INADVERTENT OPERATION OF CONTROLS.

BEFORE APPLYING OR RELIEVING HYDRAULIC SYSTEM PRESSURE MAKE CERTAIN THAT THE TRAVEL RANGES OF THE CONTROL SURFACES ARE CLEAR.

A. Equipment and Materials

ITEM	DESIGNATION
A.	Warning Notices - Prohibiting the Operation of Flying Controls
B.	Access Platform 4 m (13 ft)
C.	Lint-free Cloth
Referenced Procedures - 29-10-00, P. Block 301	Main Hydraulic Power

B. Procedure

(1)Job Set-Up

(a)Depressurize hydraulic system (Ref. 29-10-00, P. Block 301).

(b)Position warning notices in flight compartment.

(c)Position access platform.

(d)Open access doors 575(675)CB, DB and BT.

(2)Removal

(Ref. Fig. 401)

(a)Remove nuts (1), washers (2), if installed, and withdraw bolts (3) from seal assembly.

(b)Remove seal assembly.

(3)Preparation for Installation

(a)Clean and inspect seal assembly/aircraft interface.

(4)Installation

(a)For seals on access doors:

1 Position seal assembly. Loosely install bolts (3), washers (2), and nuts (1).

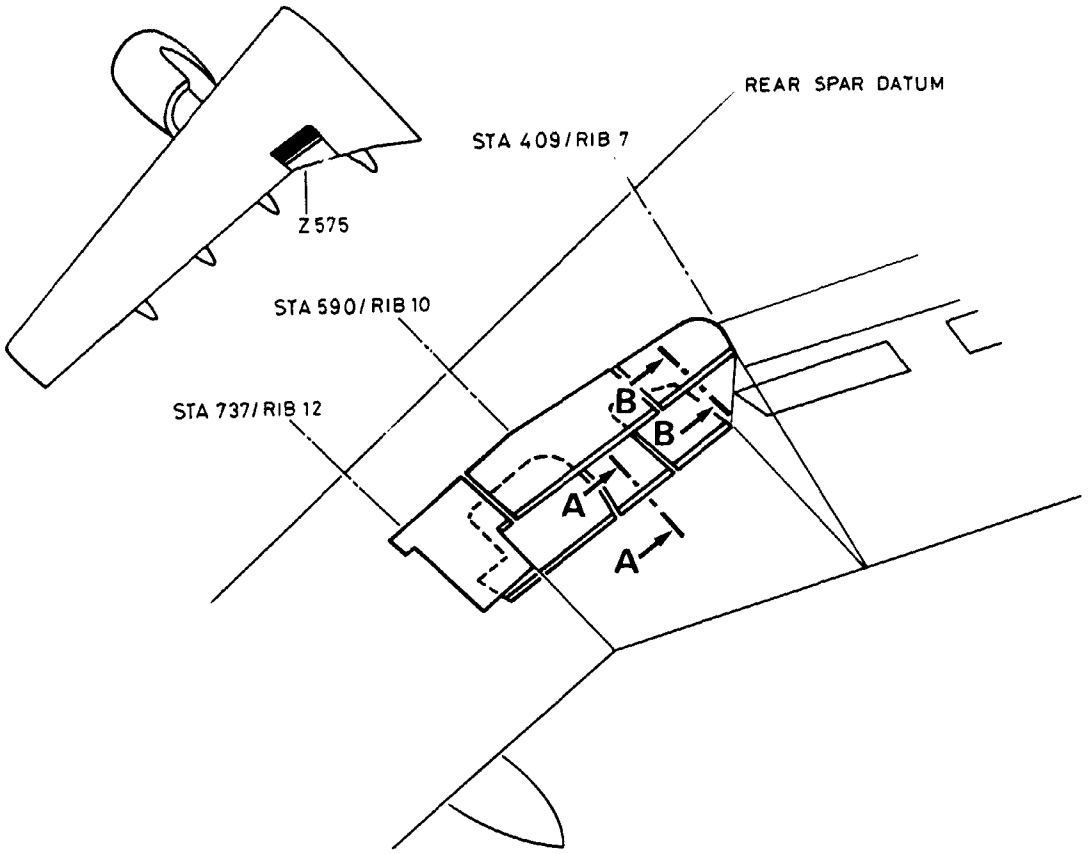
2 Place door in position on aircraft. Adjust seal assembly position until brush just contacts aileron along entire length.

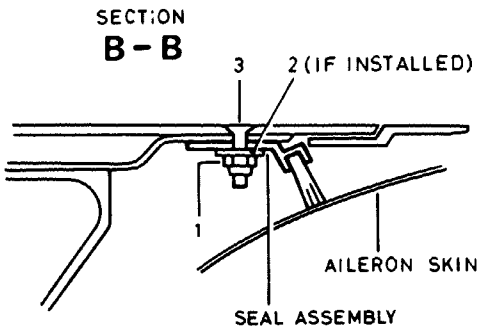
3 Without disturbing position of seal assembly, open access door and tighten bolts (3).

(b)For seals on fixed structure:

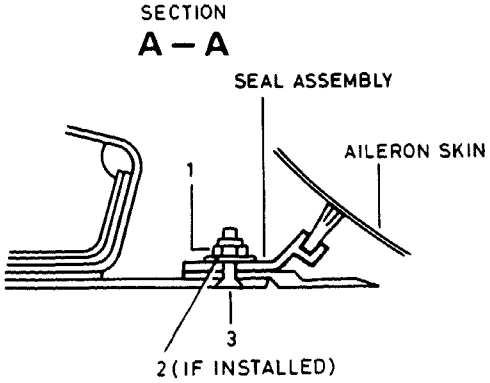
1 Position seal assembly, and loosely fit bolts (3), washers (2), and nuts (1).

2 Adjust position of seal assembly until brush just contacts aileron along entire length.





TYPICAL SECTION ON UPPER
DOOR BRUSH SEAL ASSEMBLY



TYPICAL SECTION ON LOWER
FIXED STRUCTURE BRUSH SEAL ASSEMBLY

BM7 57 51 12 4 AAMO/13

Brush Seal Assembly - Installation Details
Figure 401

3 Without disturbing position of seal assembly, tighten bolts (3).

(5)Test

Not applicable.

(6)Close-Up

(a)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(b)Close access doors.

(c)Withdraw access platform.

(d)Remove warning notices.

ALL SPEED AILERON ATTACHMENT BEARING - REMOVAL/INSTALLATION

WARNING : LANDING GEAR - MAKE SURE THAT THE GROUND SAFETIES AND CHOCKS ARE IN POSITION.

FLIGHT CONTROLS - MAKE SURE THAT THE GROUND SAFETIES AND NOTICES ARE IN POSITION.

USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD SUPPLY OF AIR.
- OBEY THE MANUFACTURERS INSTRUCTIONS
- PUT ON PROTECTIVE CLOTHING
- DO NOT GET THEM IN YOUR MOUTH
- DO NOT SMOKE
- DO NOT BREATHE THE GAS.

THESE MATERIALS ARE POISONOUS AND FLAMMABLE AND SKIN IRRITANTS.
GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

1. Reason for the Job

A. To replace a worn or corroded bearing.

2. Equipment and Materials

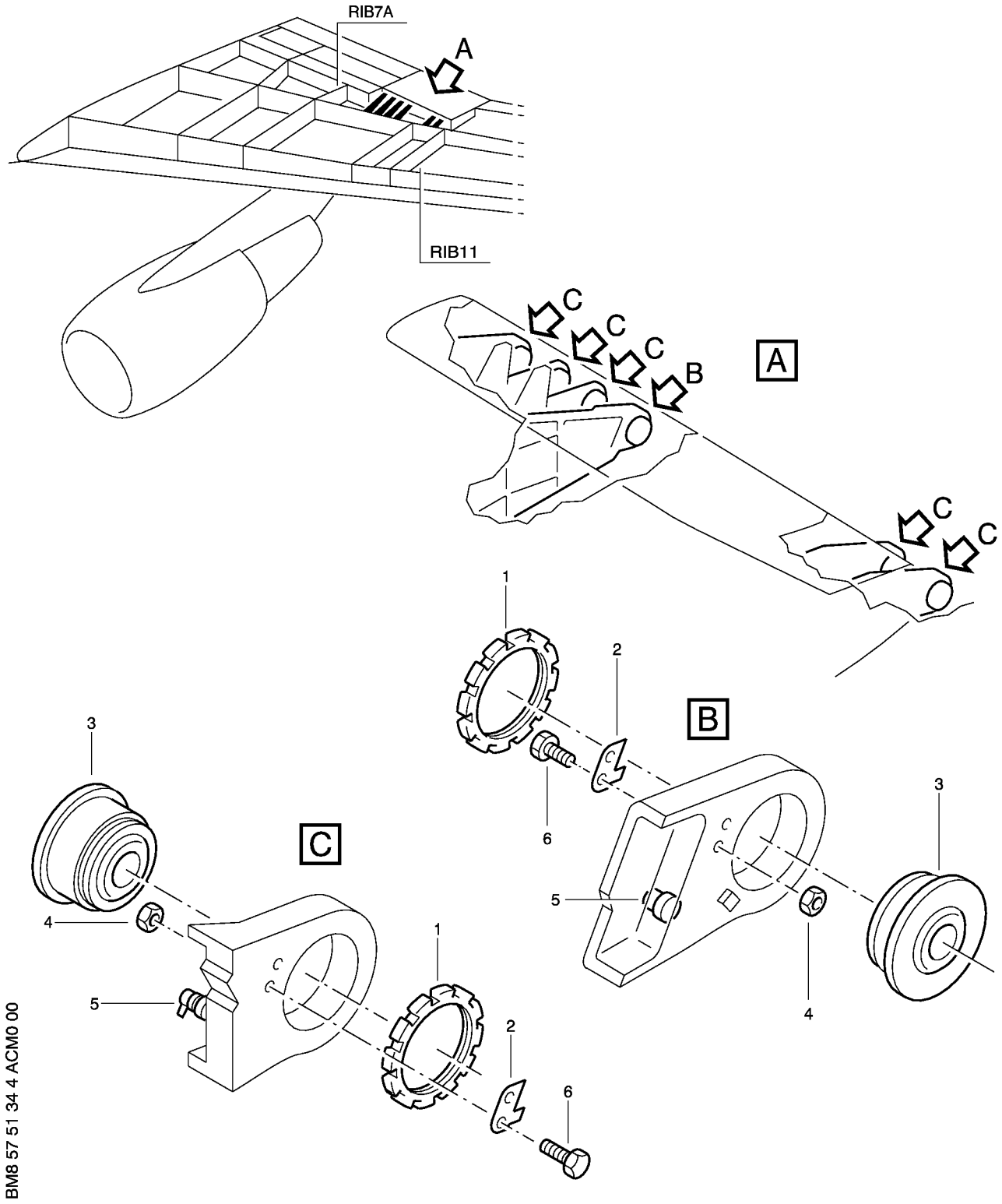
ITEM	DESIGNATION
A. Material No. 04-004	Common Greases
B. Material No. 08-021	Adhesion Promoter (Ref. 20-31-00)
C. Material No. 09-013A	Sealants (Ref. 20-31-00)
D. Material No. 11-026	Cleaning Agents (Ref. 20-31-00)
E.	Lint-Free Cloth
F.	Brush
G.	Non-Metallic Scraper
Referenced Procedures	
- 27-11-28, P. Block 401	All-Speed Aileron

3. Procedure

B. Removal (Ref. Fig. 401)
(1)Remove the all-speed aileron (Ref. 27-11-28, P. Block 401).
(2)At ribs 7A thru 11 remove the nuts (4), the bolts (6) and the locking plate (2).
(3)Use a non-metallic scraper to remove the bead of sealant from around the flange of the bearing (3), the threads and the locking ring (1).
(4)Remove the locking ring (1) and the bearing (3).

C. Preparation of the Replacement Component

(1)Use a clean lint-free cloth made moist with cleaning agent (Material No. 11-026) to clean the replacement bearing (3) and the bearing holes in the ribs. Make sure that the grease holes and the greaseways are clean



Aileron Attachment Bearing Installation
Figure 401

and free from obstructions.

D. Installation (Ref. Fig. 401)

NOTE : You must install the bearings dry.

(1)Install the replacement bearing (3) in the rib. Connect and fully tighten the locking ring (1).
(2)Install the locking plate (2) with the bolts (6) and nuts (4).

NOTE : To engage the lug of the locking plate (2) and the slot of the locking ring (1) you can turn the locking plate (2) over. If necessary, you can tighten the locking ring (1) more.

(3)Use a clean lint-free cloth made moist with cleaning agent (Material No. 11-026) to clean the locking ring (1), the threads and flange of the bearing (3) and the adjacent areas.
(4)Use a brush to apply adhesion promoter (Material No. 08-021) to the locking ring (1), the threads, the flange of the bearing (3) and the adjacent areas.
(5)Let the adhesion promoter (Material No. 08-021) dry for a minimum of 30 minutes and a maximum of 4 hours.

NOTE : If you let the adhesion promoter (Material No. 08-021) dry for more than 4 hours, you must remove it. Use a clean lint-free cloth made moist with cleaning agent (Material No. 11-026). Then apply a new layer of adhesion promoter (Material No. 08-021). Do the procedures in steps (4) and (5) again.

(6)Apply a continuous bead of sealant (Material No. 09-013A) around the flange of the bearing (3), the threads, and the castellations of the locking ring (1).
(7)Apply grease (Material No. 04-004) through the greaser (5). Make sure that the grease is evenly applied around the bearing (3).

E. Close-Up
(1)Make sure that the work area is clean and clear of all tools and other items of equipment.
(2)Install the all-speed aileron (Ref. 27-11-28, P. Block 401).

TRAILING EDGE ATTACH FITTINGS - INSPECTION/CHECK

1. Reasons for the Job

A. Aileron Hinge Attach Fittings - With removal, check of Fits and Clearances (Ref. Para. 4).

B. Spoiler 1 thru 7 Hinge Attach Fittings - With removal, check of Fits and Clearances (Ref. Para. 5).

2. Equipment and Materials

Not applicable.

3. Procedure (Ref. Fig. 601, 602, 603) (Ref. Fig. 604, 605, 606)

4. Aileron Hinge Attach Fittings

Table of Fits and Clearances (Ref. Fig. 601)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A ID1	1.4995 (38.087)	1.5005 (38.113)				1.5015 (38.138)	
			0.0004 (0.010)	0.0020 (0.051)			0.0040 (0.102)
OD2	1.4985 (38.062)	1.4991 (38.077)			1.4975 (38.036) *		
ID3	1.4995 (38.087)	1.5005 (38.113)				1.5015 (38.138)	
			0.0004 (0.010)	0.0020 (0.051)			0.0040 (0.102)
OD2	1.4985 (38.062)	1.4991 (38.077)			1.4975 (38.036) *		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
ID4	1.6875 (42.863)	1.6885 (42.888)				1.6895 (42.914)	
			0.0004 (0.010)	0.0020 (0.051)			0.0040 (0.102)
OD1	1.6865 (42.837)	1.6871 (42.852)			1.6855 (42.812)		
ID5	1.6875 (42.863)	1.6885 (42.888)				1.6895 (42.914)	
			0.0004 (0.010)	0.0020 (0.051)			0.0040 (0.102)
OD3	1.6865 (42.837)	1.6871 (42.852)			1.6855 (42.812)		
ID6	1.4995 (38.087)	1.5000 (38.100)				1.5010 (38.125)	
			0.0004 (0.010)	0.0015 (0.038)			0.0035 (0.089)
OD2	1.4985 (38.062)	1.4991 (38.077)			1.4975 (38.036) *		
B ID7	1.4995 (38.087)	1.5005 (38.113)				1.5015 (38.138)	
			0.0004 (0.010)	0.0020 (0.051)			0.0040 (0.102)
OD8	1.4985 (38.062)	1.4991 (38.077)			1.4975 (38.036) *		
ID9	1.4995 (38.087)	1.5005 (38.113)				1.5015 (38.138)	
			0.0004 (0.010)	0.0020 (0.051)			0.0040 (0.102)
OD8	1.4985 (38.062)	1.4991 (38.077)			1.4975 (38.036) *		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
ID10	1.6875 (42.863)	1.6885 (42.888)				1.6895 (42.913)	
			0.0004 (0.010)	0.0020 (0.051)			0.0040 (0.102)
OD9	1.6865 (42.837)	1.6871 (42.852)			1.6855 (42.812)		
ID11	1.4995 (38.087)	1.5000 (38.100)				1.5010 (38.125)	
			0.0004 (0.010)	0.0015 (0.038)			0.0035 (0.089)
OD8	1.4985 (38.062)	1.4991 (38.077)			1.4975 (38.036) *		

(Ref. Fig. 601)

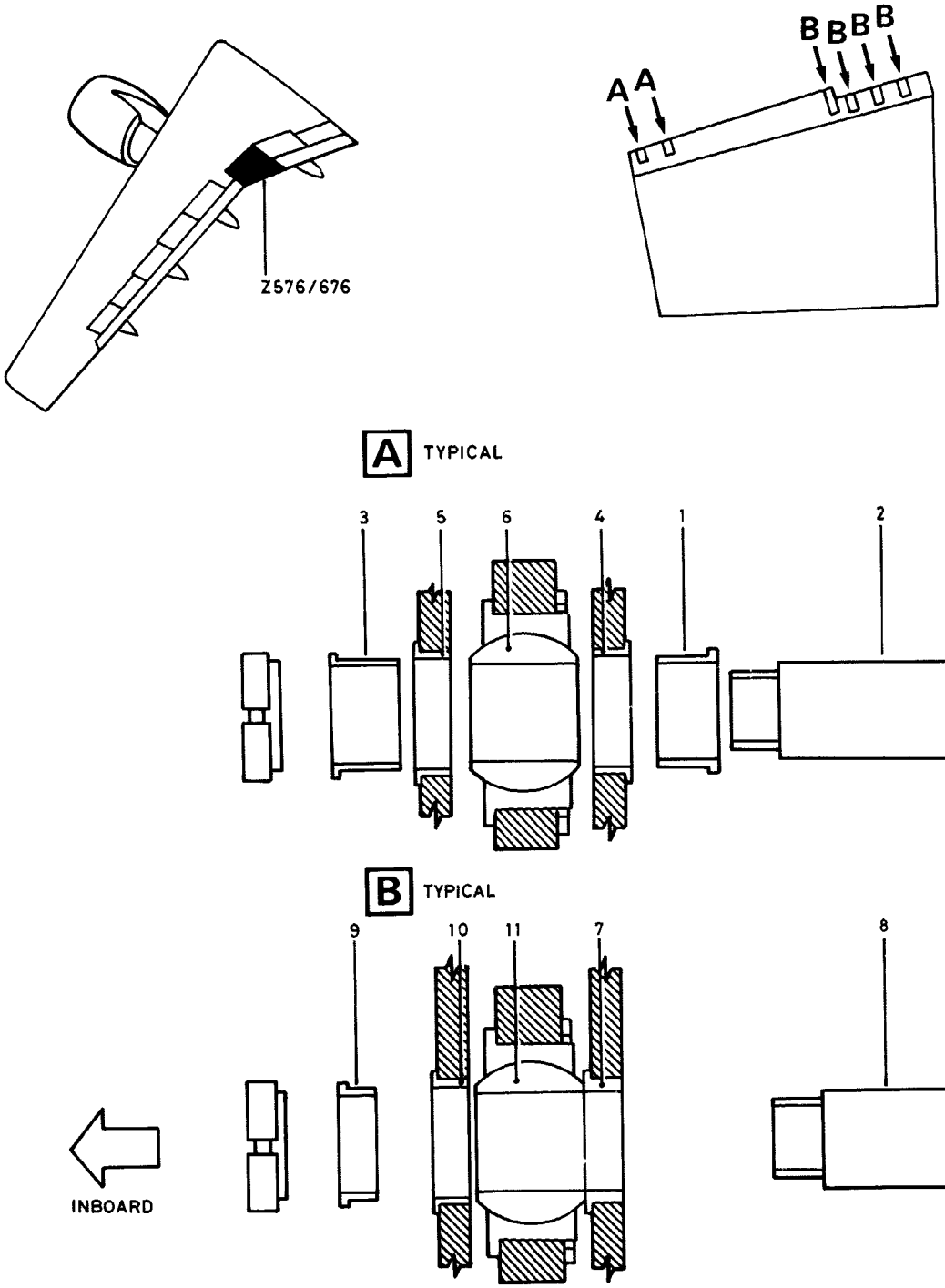
5. Spoiler No.1 thru 7 Hinge Attach Fittings

Table of Fits and Clearances (Ref. Fig. 602)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A ID1	0.6250 (15.875)	0.6262 (15.905)				0.6275 (15.938)	
			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD2	0.6242 (15.855)	0.6247 (15.867)			0.6235 (15.837)		

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
					*		
ID3	0.8750 (22.225)	0.8762 (22.255)				0.8775 (22.289)	
			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD1	0.8742 (22.205)	0.8747 (22.217)			0.8735 (22.187)		
ID4	0.6250 (15.875)	0.6257 (15.893)				0.6270 (15.926)	
			0.0003 (0.008)	0.0015 (0.038)			0.0035 (0.089)
OD2	0.6242 (15.855)	0.6247 (15.867)			0.6235 (15.837)		
					*		
ID5	0.7495 (19.037)	0.7500 (19.050)				0.7515 (19.088)	
			0.0008 (0.020)	0.0029 (0.074)			0.0055 (0.140)
OD4	0.7471 (18.976)	0.7487 (19.017)			0.7460 (18.948)		



Aileron Hinge Attach Fittings
Figure 601

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
ID6	0.6250 (15.875)	0.6260 (15.900)				0.6270 (15.926)	
			0.0003 (0.008)	0.0018 (0.046)			0.0035 (0.089)
OD2	0.6242 (15.855)	0.6247 (15.867)			0.6235 (15.837) *		
B ID7	0.5000 (12.700)	0.5007 (12.718)				0.5015 (12.738)	
			0.0005 (0.013)	0.0016 (0.041)			0.0035 (0.089)
OD8	(0.4991 (12.677)	0.4995 (12.687)			0.4980 (12.649) *		
ID9	0.6250 (15.875)	0.6260 (15.900)				0.6270 (15.926)	
							0.0035 (0.089)
OD7	0.6243 (15.857)	0.6247 (15.867)			0.6235 (15.837)		
ID10	0.4995 (12.687)	0.5000 (12.700)				0.5010 (12.725)	
			0.0000 (0.000)	0.0009 (0.023)			0.0025 (0.063)
OD8	0.4991 (12.677)	0.4995 (12.687)			0.4985 (12.662) *		

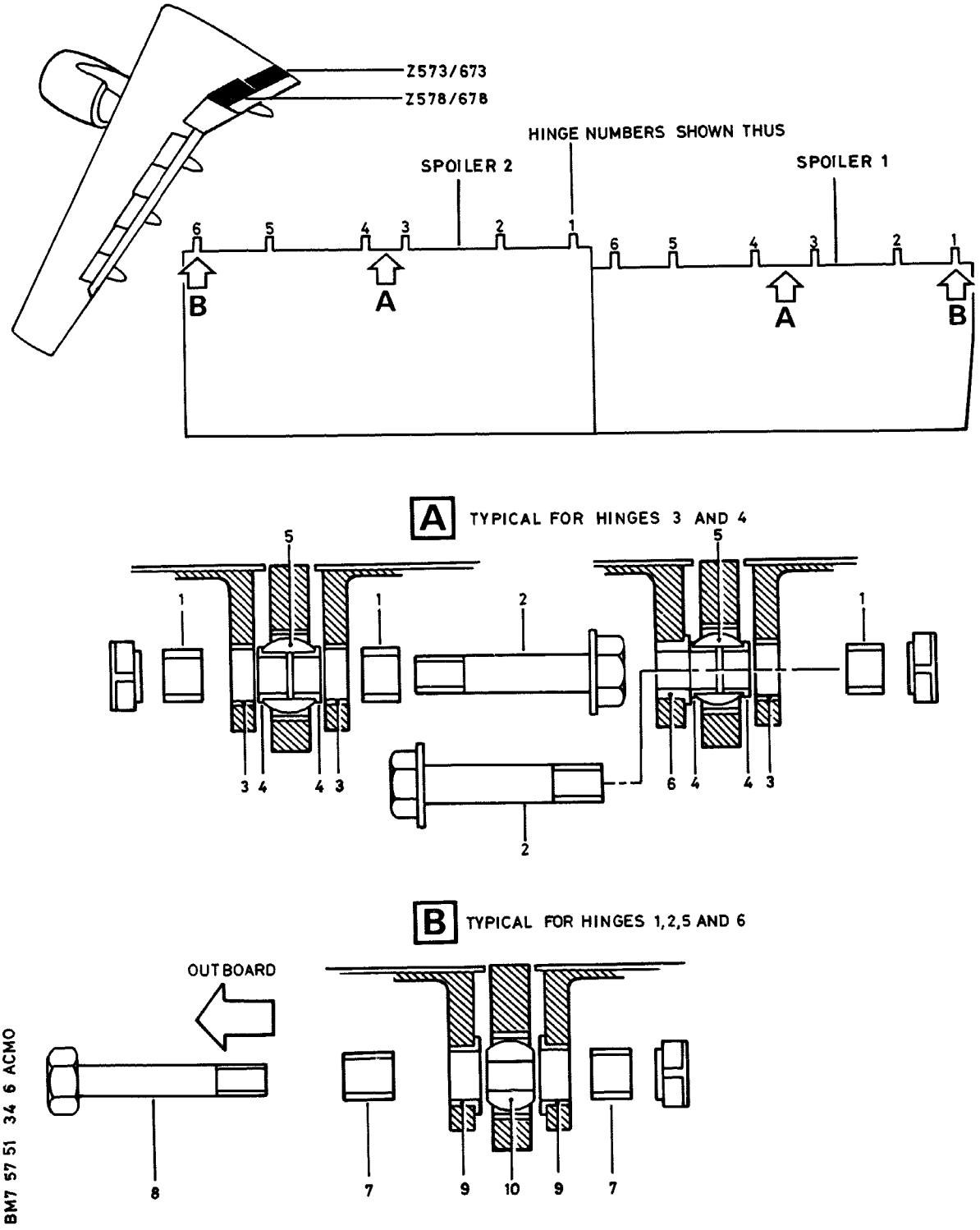
(Ref. Fig. 602)

Table of Fits and Clearances (Ref. Fig. 603)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A	0.8750 (22.225)	0.8762 (22.255)				0.8775 (22.289)	
ID1			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD2	0.8742 (22.205)	0.8747 (22.217)			0.8735 (22.187) *		
ID3	1.1250 (28.575)	1.1262 (28.605)				1.1275 (28.639)	
			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD1	1.1242 (28.555)	1.1247 (28.567)			1.1235 (28.537)		
ID4	0.8750 (22.225)	0.8762 (22.255)				0.8775 (22.289)	
			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD2	0.8742 (22.205)	0.8747 (22.217)			0.8735 (22.187) *		
ID5	0.9995	1.0000				1.0015	

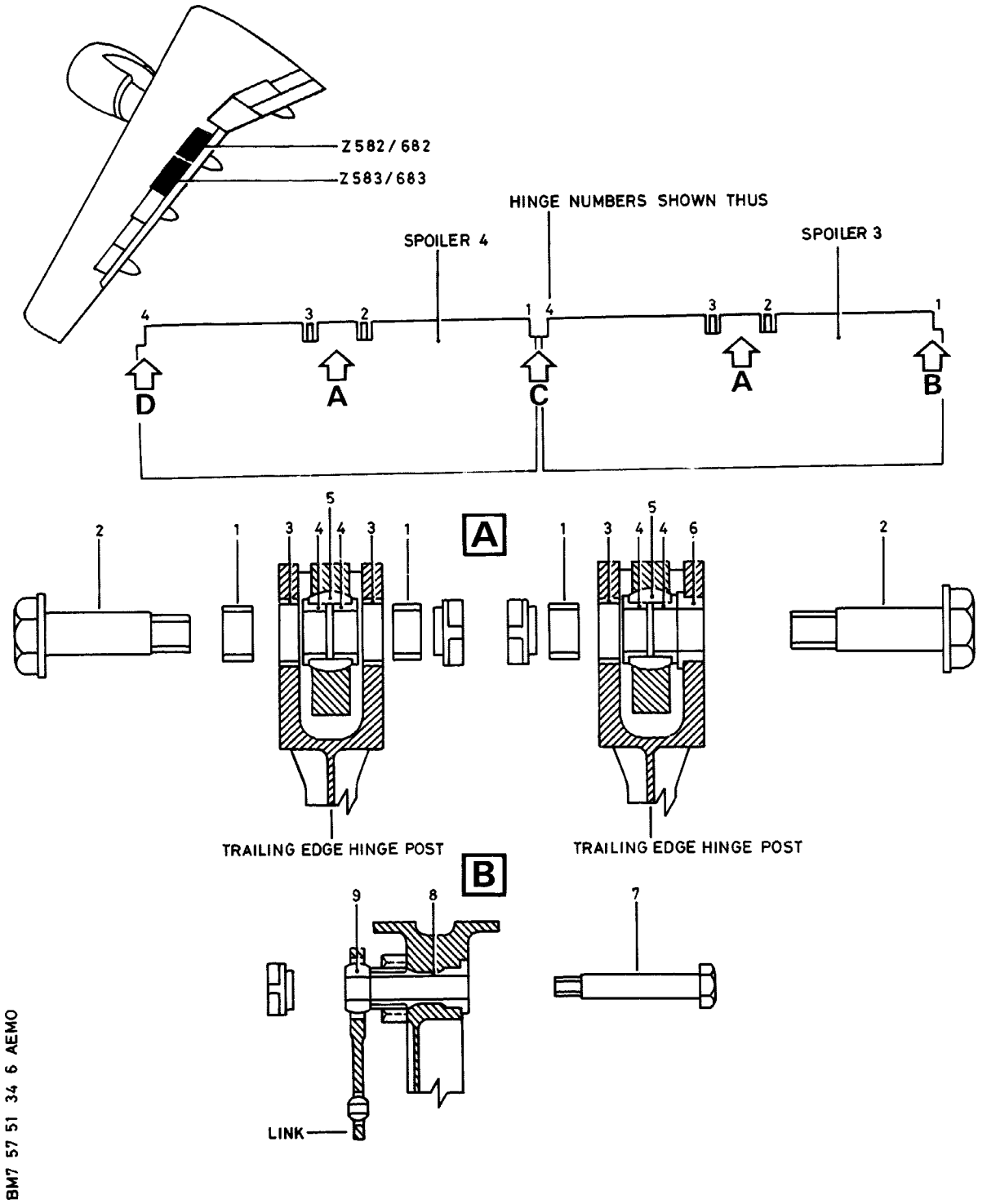
Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
	(25.387)	(25.400)				(25.438)	
			0.0008 (0.020)	0.0029 (0.074)			0.0055 (0.140)
OD4	0.9971 (25.326)	0.9987 (25.367)			0.9960 (25.044)		
ID6	0.8750 (22.225)	0.8762 (22.255)				0.8775 (22.289)	
			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD2	0.8742 (22.205)	0.8747 (22.217)			0.8735 (22.187) *		



Spoiler 1 and 2 Hinge Attach Fittings
Figure 602

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
B OD7	0.4988 (12.669)	0.4992 (12.679)			0.4980 (12.649)		
			0.0003 (0.008)	0.0017 (0.044)			0.0035 (0.089)
ID8	0.4995 (12.687)	0.5005 (12.713)				0.5015 (12.738)	
ID9	0.4995 (12.687)	0.5000 (12.700)				0.5010 (12.725)	
			0.0003 (0.008)	0.0012 (0.030)			0.0030 (0.076)
OD7	0.4988 (12.669)	0.4992 (12.679)			0.4980 (12.649)		

(Ref. Fig. 603)



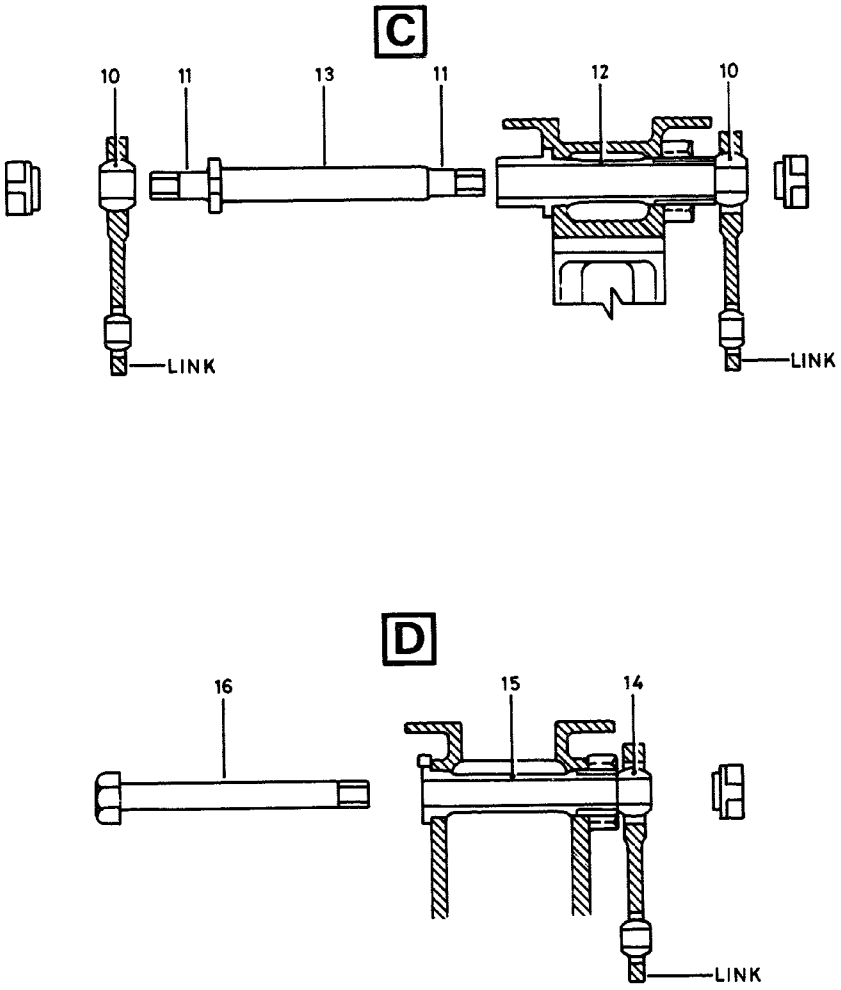
Spoiler 3 and 4 Hinge Attach Fittings
Figure 603

Table of Fits and Clearances (Ref. Fig. 604)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
C	0.4995	0.5000				0.5010	
ID10	(12.687)	(12.700)				(12.725)	
			0.0003	0.0012			0.0030
			(0.008)	(0.030)			(0.076)
OD11	0.4988	0.4992			0.4980		
	(12.669)	(12.679)			(12.649)		
ID12	0.5625	0.5635				0.5645	
	(14.287)	(14.313)				(14.338)	
			0.0006	0.002			0.0040
			(0.015)	(0.0050)			(0.102)
OD13	0.5615	0.5619			0.5605		
	(14.262)	(14.272)			(14.237)		
D	0.4995	0.5000				0.5010	
ID14	(12.687)	(12.700)				(12.725)	
			0.0003	0.0012			0.0030
			(0.008)	(0.030)			(0,076)
OD16	(0.4988	0.4992			0.4980		
	(12.669)	(12.679)			(12.649)		
ID15	0.4995	0.5005				0.5015	
	(12.687)	(12.713)				(12.738)	
			0.0003	0.0017			0.0035
			(0.008)	(0.044)			(0.089)
OD16	0.4988	0.4992			0.4980		
	(12.669)	(12.679)			(12.649)		

(Ref. Fig. 604)



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Spoiler 3 and 4, Further Details
Figure 604

Table of Fits and Clearances (Ref. Fig. 605)

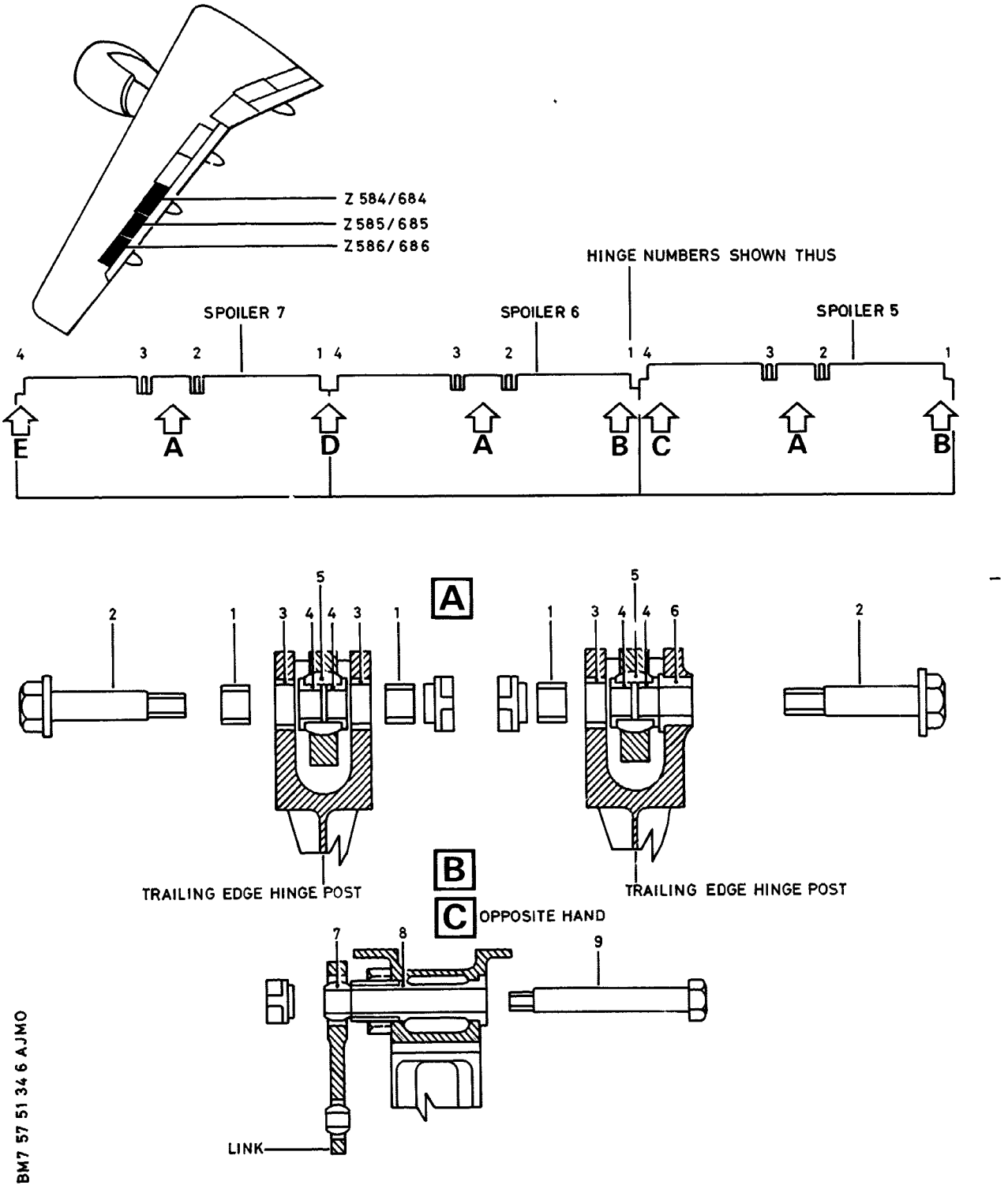
NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
A	0.6250 (15.875)	0.6262 (15.905)				0.6275 (15.938)	
ID1			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD2	0.6242 (15.855)	0.6247 (15.867)			0.6235 (15.837) *		
ID3	0.8750 (22.225)	0.8762 (22.255)				0.8775 (22.289)	
			0.0003 (0.008)	0.0020 (0.050)			0.0040 (0.102)
OD1	0.8742 (22.205)	0.8747 (22.217)			0.8735 (22.187)		
ID4	0.6248 (15.870)	0.6254 (15.885)				0.6265 (15.875)	
			0.0001 (0.002)	0.0012 (0.030)			0.0030 (0.076)
OD2	0.6242 (15.855)	0.6247 (15.867)			0.6235 (15.837)		
ID5	0.7495 (19.037)	0.7500 (19.050)				0.7510 (19.725)	
			0.0001 (0.002)	0.0011 (0.028)			0.0030 (0.076)
OD4	0.7489	0.7494			0.7480		

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
	(19.022)	(19.035)			(19.000)		
ID6	0.6250 (15.875)	0.6260 (15.900)				0.6270 (15.926)	
			0.0003 (0.008)	0.0018 (0.046)			0.0035 (0.089)
OD2	0.6242 (15.855)	0.6247 (15.867)			0.6235 (15.837) *		

Detail and Item No.	Original Mfg Limits				In-Service Wear Limits		
	Dimension inches (Millimeters)		Assy. Clearance Inch. (Milli.)		Dimension Limits Inch. (Milli.)		Max. Allow. clear in. (mm)
	Min.	Max.	Min.	Max.	Min.	Max.	
B ID7	0.4995 (12.687)	0.5000 (12.700)				0.5010 (12.725)	
			0.0003 (0.008)	0.012 (0.030)			0.0030 (0.076)
OD9	0.4988 (12.669)	0.4992 (12.679)			0.4980 (12.649)		
ID8	0.4995 (12.687)	0.5005 (12.713)				0.5015 (12.738)	
			0.0003 (0.008)	0.0017 (0.044)			0.0035 (0.089)
OD9	0.4988 (12.669)	0.4992 (12.679)			0.4980 (12.650)		

(Ref. Fig. 605)



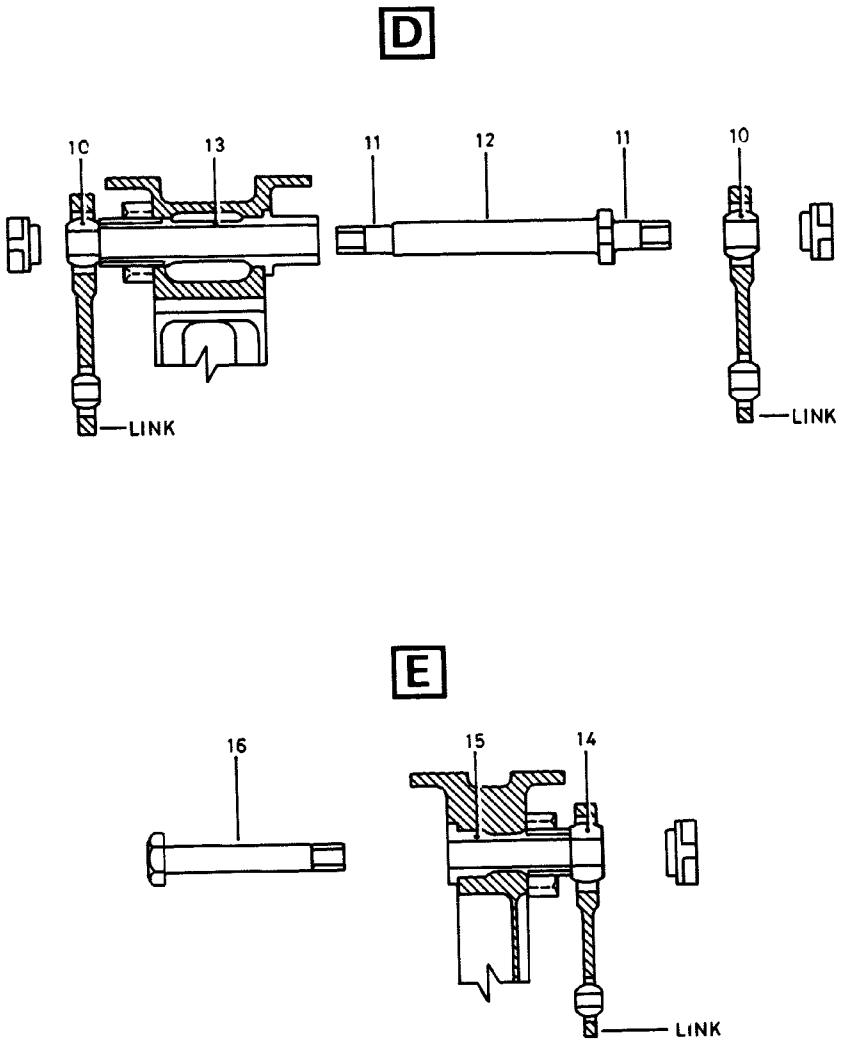
Spoiler 5 thru 7 Hinge Attach Fittings
Figure 605

Table of Fits and Clearances (Ref. Fig. 606)

NOTE : Limits annotated with an asterisk *, only apply while there is a thickness of chrome plating remaining on the bearing surface.

Detail and Item No.	Original Mfg Limits: Dimension inches (Millimeters) Min.	Original Mfg Limits: Dimension inches (Millimeters) Max.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Min.	Original Mfg Limits: Assy. Clearance Inch. (Milli.) Max.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Min.	In-Service Wear Limits: Dimension Limits Inch. (Milli.) Max.	In-Service Wear Limits: Max. Allow. clear in. (mm)
D ID10	0.4995 (12.687)	0.5000 (12.700)				0.5010 (12.725)	
			0.0003 (0.008)	0.0012 (0.030)			0.0030 (0.076)
OD11	0.4988 (12.669)	0.4992 (12.679)			0.4980 (12.649)		
OD12	0.5615 (14.262)	0.5619 (14.272)			0.5605 (14.236)		
			0.0006 (0.015)	0.0020 (0.051)			0.0040 (0.102)
ID13	0.5625 (14.287)	0.5635 (14.313)				0.5645 (14.338)	
E ID14	0.4995 (12.687)	0.5000 (12.700)				0.5010 (12.725)	
			0.0003 (0.008)	0.0012 (0.030)			0.0030 (0.076)
OD16	0.4988 (12.669)	0.4992 (12.679)			0.4980 (12.649)		
ID15	0.4995 (12.687)	0.5005 (12.713)				0.5015 (12.738)	
			0.0003 (0.008)	0.0017 (0.044)			0.0035 (0.089)
OD16	0.4988 (12.669)	0.4992 (12.679)			0.4980 (12.649)		

(Ref. Fig. 606)



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Spoiler 5 thru 7, Further Details
Figure 606

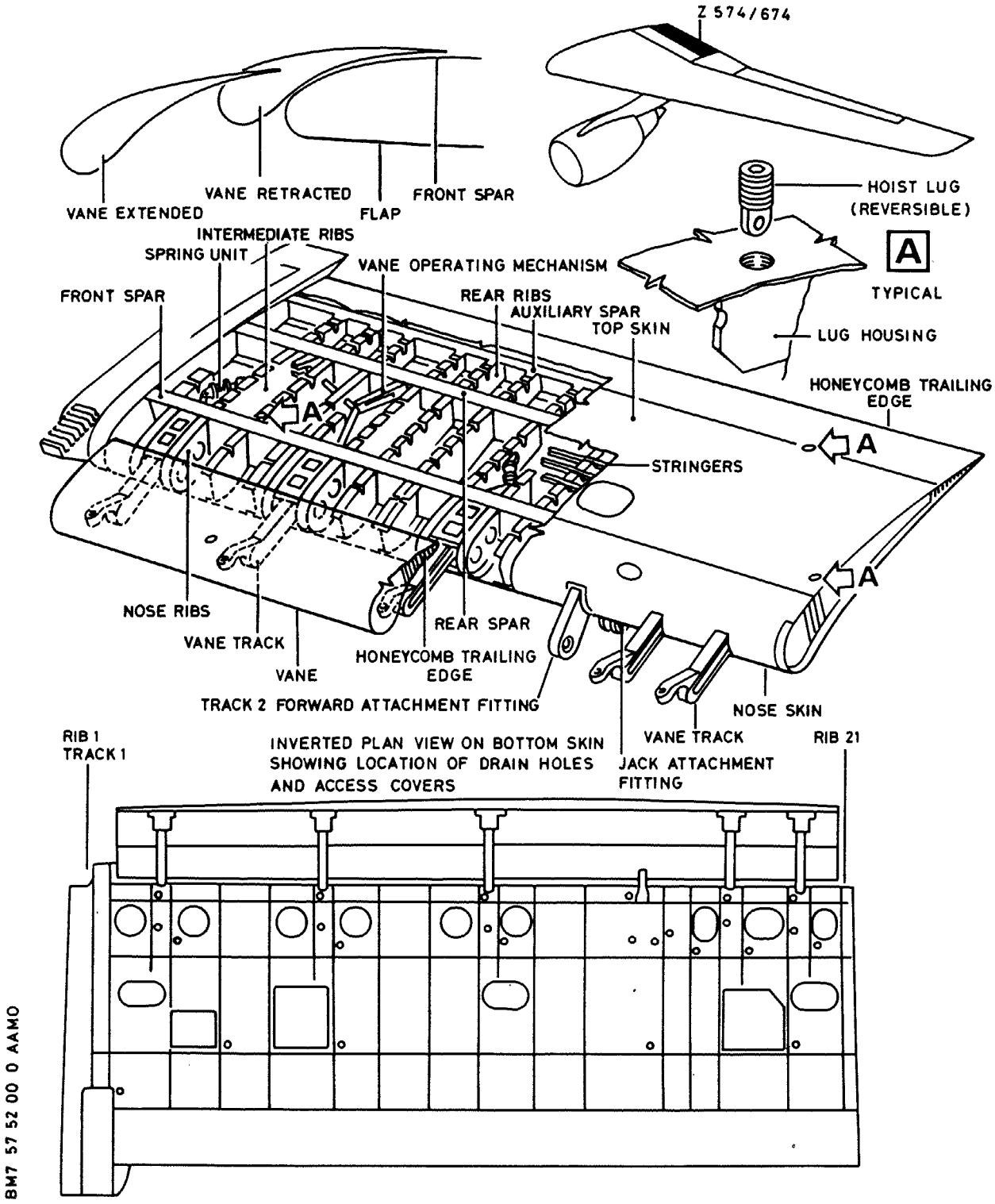
INBOARD FLAP - DESCRIPTION AND OPERATION

1. General

The inboard flap, is of conventional construction and includes a movable leading edge vane. A bonded honeycomb core trailing edge is fitted. In areas of high load use is made of titanium and steel. Access covers are provided in the top and bottom skins, and three reversible NSA hoist lugs are housed in the upper surface. Drain holes are provided in the bottom skin.

The vane is of conventional construction comprising a framework of aluminum alloy spars, ribs and stringers covered with a chemically milled aluminum alloy skin. A bonded honeycomb core trailing edge is fitted. The vane is attached to the flap by five tracks and is automatically extended by the action of two spring mechanisms at tracks 2 and 4 as the flap extends rearwards. Forward travel of the vane is restricted by spring-loaded stops. Upon retraction of the flaps, the vane is held in the closed position by its abutment against the buffers mounted on the wing structure.

The inboard flap is supported by two track beams (1 and 2). Track beam 1 is mounted on the fuselage and is covered by the wing/fuselage fairing, while track beam 2 is mounted below the wing. The flap operating screw jacks are mounted alongside the track beams.
(Ref. Fig. 001)



Inboard Flap
Figure 001

OUTBOARD FLAP - DESCRIPTION AND OPERATION

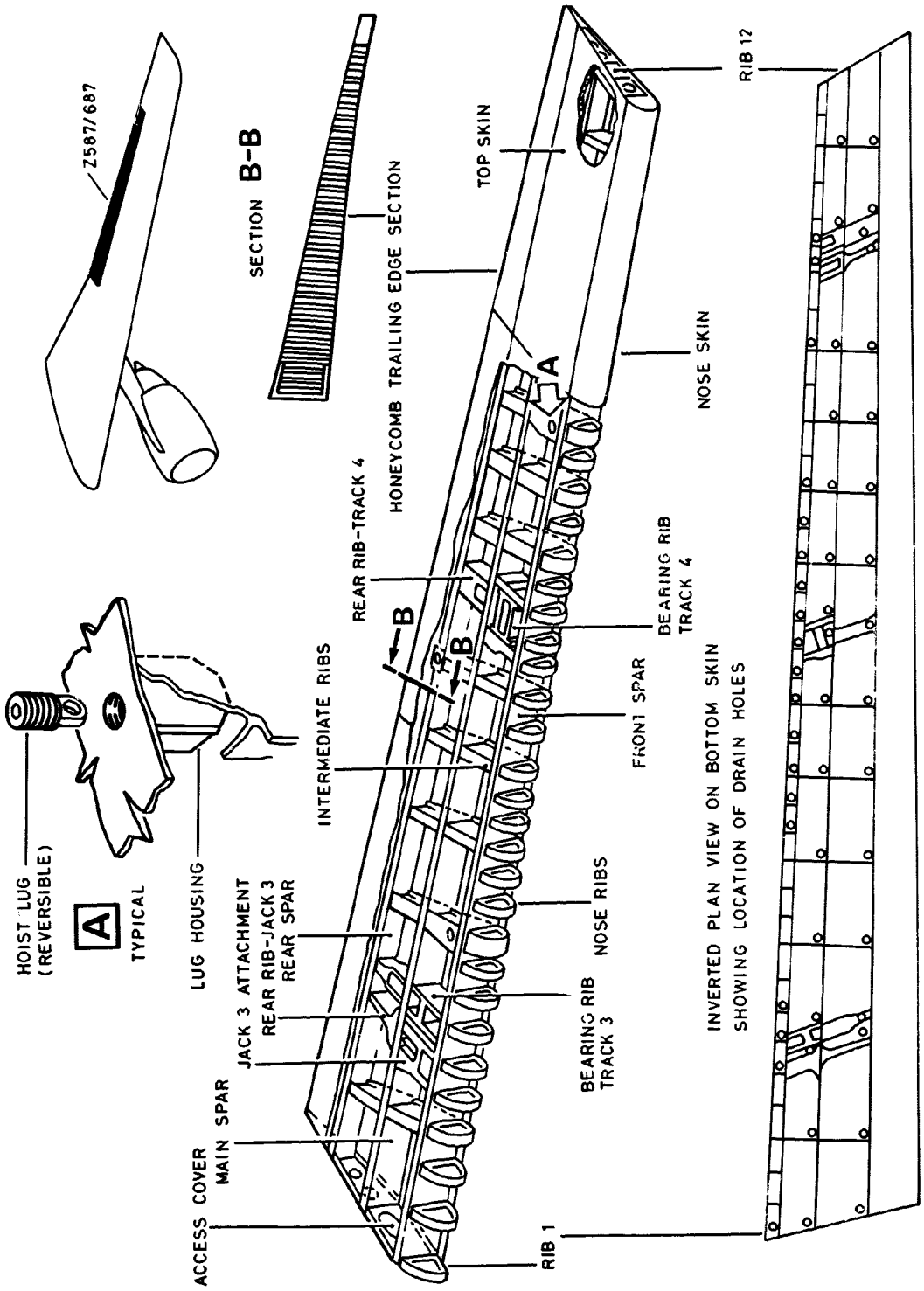
1. General

The outboard flap is of conventional construction comprising a framework of machined aluminum alloy spars and ribs. Nose and aft end ribs and the leading-edge nose skin are of formed aluminum alloy sheet.

The trailing-edge member consists of three sections of honeycomb construction bonded to aluminum alloy sheet skins. Top and bottom skin panels, with a honeycomb core, enclose the flap frame.

The flap structure includes three bearing ribs, to provide attachment points for carriages which support the flap on the aircraft. These carriages are carried on track beams (3, 4 and 5) mounted below the wing; flap actuation is by two screwjacks adjacent to track beams 3 and 5. Carbon fibre composite access covers are installed on the end ribs and three reversible NSA hoist lugs are housed in the upper surface.

Drain holes are provided along the length of the flap bottom skin, in line with the three spars.
(Ref. Fig. 001)



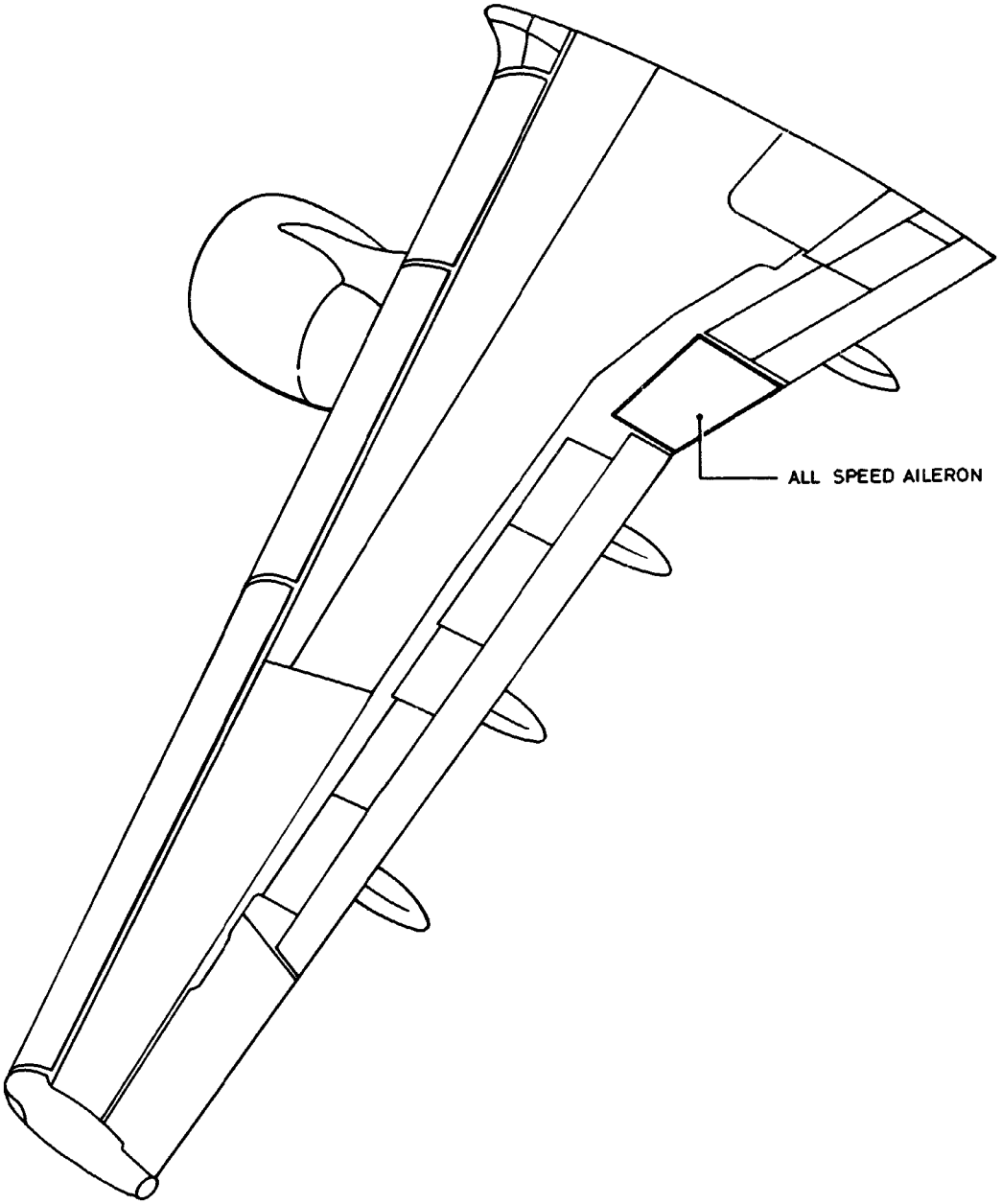
Outboard Flap
Figure 001

AILERONS - DESCRIPTION AND OPERATION

1. General

The control surfaces on each wing include an aileron located to the rear of the engine, between the inner and outer flaps. It is powered by three hydraulic servo controls acting in parallel on the inboard end. The servo controls are located between four mounting hinges, one of which reacts side-loads. Two further separate hinges are mounted near the outboard end of the aileron, which is of conventional aluminum alloy construction.

(Ref. Fig. 001)



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Aileron
Figure 001

ALL SPEED AILERON - DESCRIPTION AND OPERATION

1. General

(Ref. Fig. 001)

The all speed aileron is constructed of aluminum alloy and comprises a front spar, nose shrouds, ribs, three shutters and a rivetted skin.

The front spar has inboard and outboard machined hinge brackets, with pairs of bushed lugs along its length. Between the hinge brackets are L-shaped upper and lower girders. Upper and lower butt-straps also adjoin the front spar and overlap the skin to nose shroud butt joint. The front spar is partially covered by upper and lower nose shrouds of honeycomb/glassfiber construction which give the leading edge a smooth regular shape. The upper outboard and lower center shrouds are fixed, but the upper inboard and the lower inboard/outboard shrouds are detachable for servicing purposes.

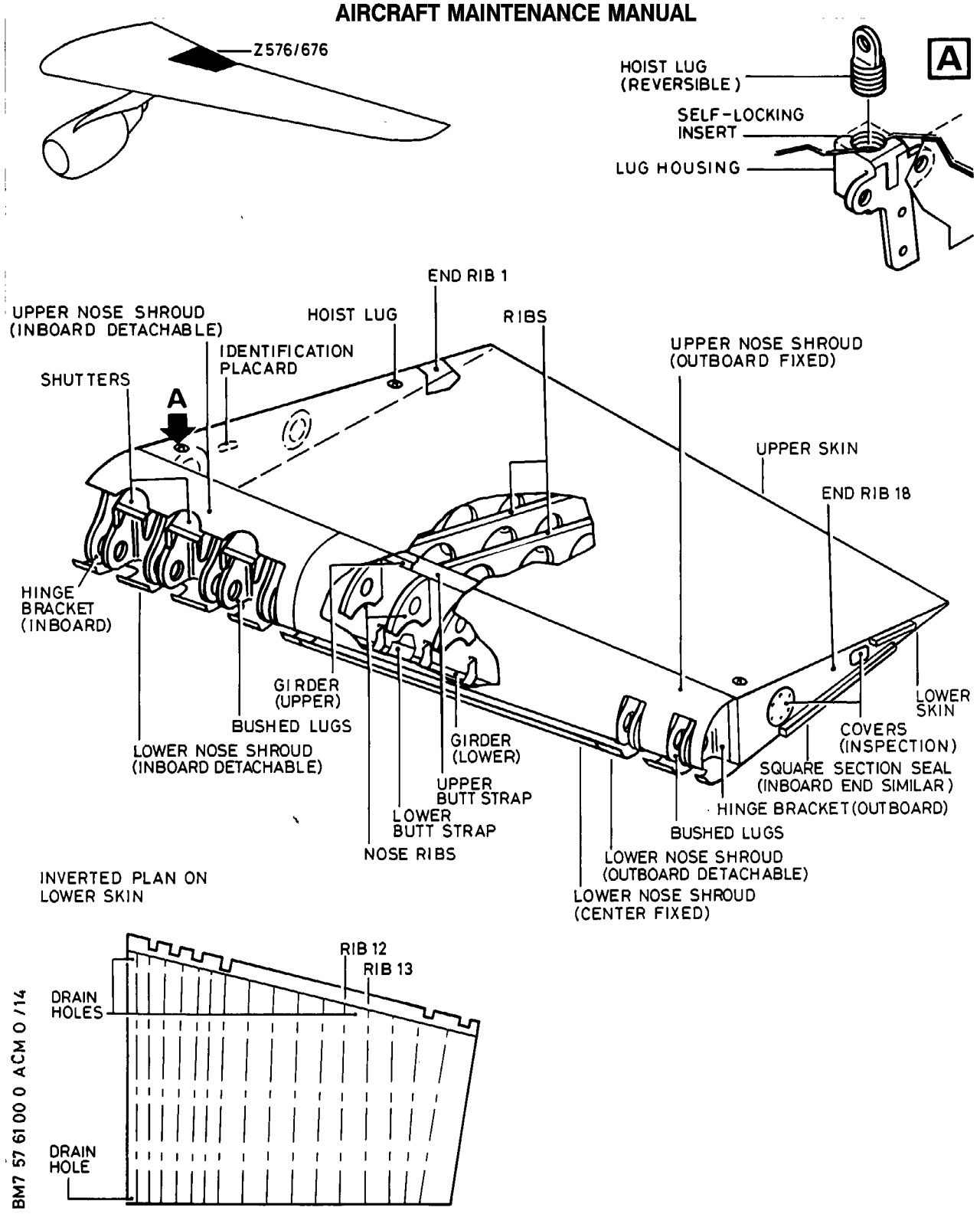
The three shutters are bolted to the inboard nose shroud.

Hollow square section seals are fitted to the inner and outer ends of the aileron, adjacent to the upper and lower surfaces. These seals abut with blade seals fixed to the inner and outer flaps, and spoiler 2, and provide aerodynamic sealing.

Five inspection covers give access to the structure; two in end rib 18 and three in end rib 1. An identification placard is riveted to end rib 1.

Three hoist lugs are housed in the upper skin secured to lug housings. The housings are riveted to the end ribs and have self-locking thread inserts. Each of the hoist lugs is reversible for lifting or stowage.

There are three drain holes in the lower skin.



All Speed Aileron
Figure 001

SPOILERS AND SPEEDBRAKES - DESCRIPTION AND OPERATION

1. General

Spoilers 1 and 2 are each attached to the shroud rear spar by six hinges and are operated by centrally-positioned electrically-signalled hydraulic actuators. In their retracted position they form the upper shroud of the inner flap.

Spoilers 3 thru 7 form, in their retracted position, the upper shroud of the outer flap. Spoilers 3 and 4, and 6 and 7, are identical and each is carried on four hinges, the center pair forming the main hinge and containing the actuator between them. The actuators are similar to those of spoilers 1 and 2.

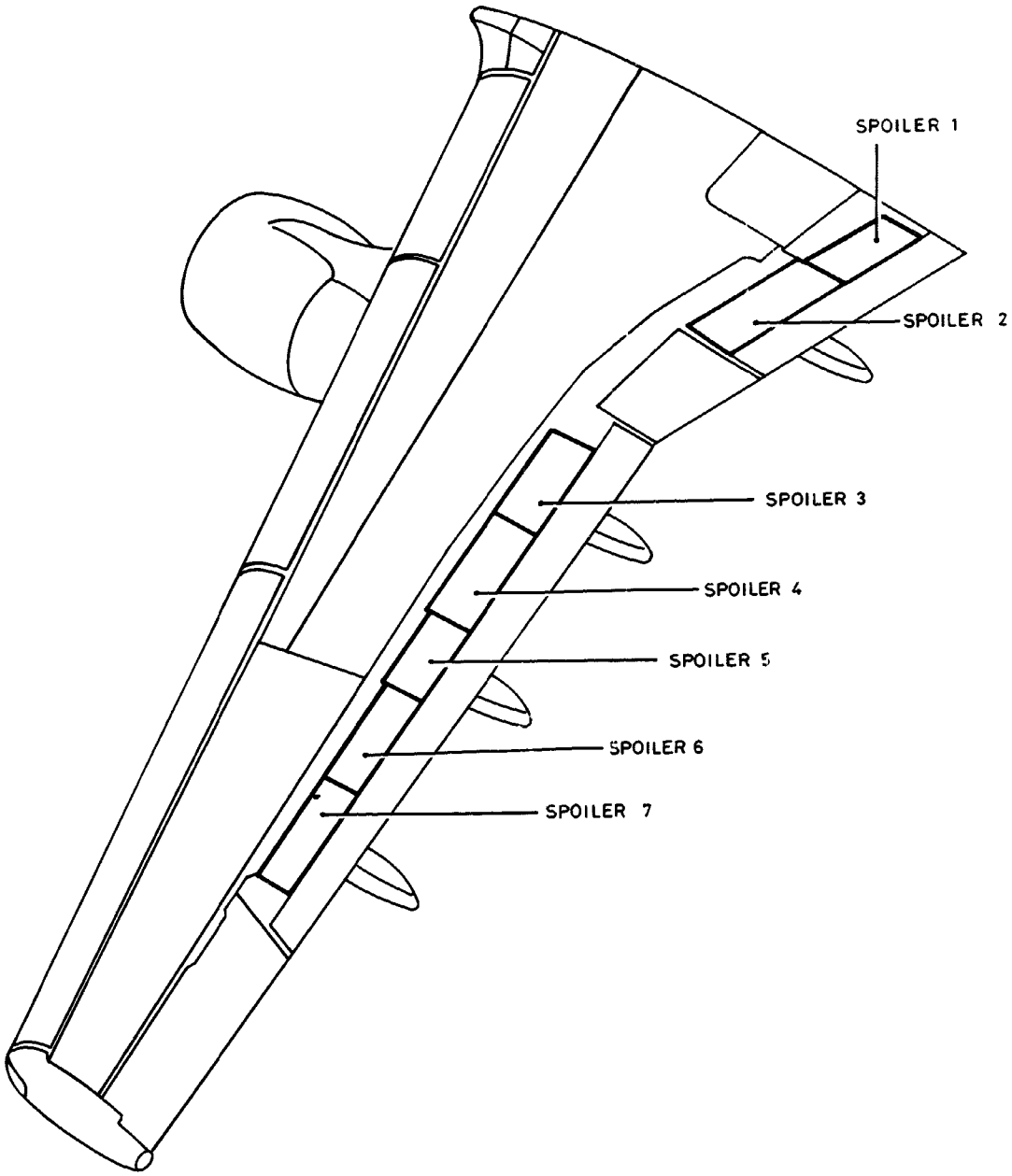
Spoilers 1 thru 4 are of hybrid construction and employ aluminum alloy, carbon fiber and titanium. Spars and fittings are fabricated from aluminum alloy, skin and ribs are carbon fiber.

Spoiler 5 thru 7 are of bonded honeycomb sandwich construction consisting of carbon fiber skins and Nomex core. Each spoiler is carried on four hinges and has a centrally mounted actuator fitting. The outer hinges are of aluminum alloy and the inner hinges and actuator fitting of titanium.

2. Pre-loading of Surfaces 1 thru 7

In cruise flight, these surfaces are subjected to aerodynamic suction; in order to prevent them from lifting off their stops, they are designed with an inbuilt convex curvature which is reduced when actuator load is applied, thus ensuring pre-loads on the stops. Plastic rubbing pads prevent damage to the flap upper surfaces.

In addition, the trailing edge consists of a titanium strip which provides aerodynamic continuity of the upper surface contour by contact with the flap.
(Ref. Fig. 001)



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Spoiler Location
Figure 001

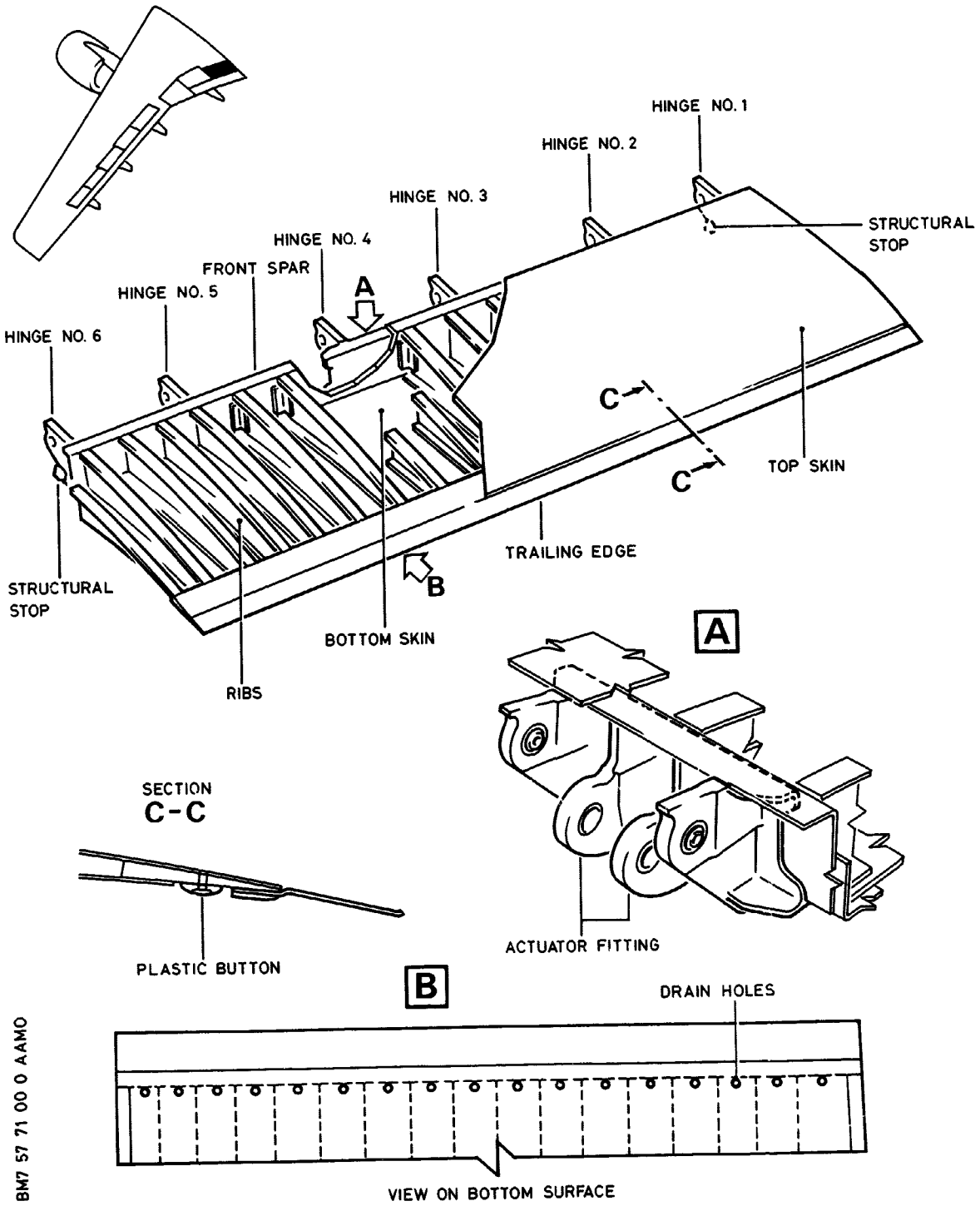
SPOILER 1 - DESCRIPTION AND OPERATION

1. General

Spoilers 1 on each wing are handed and are attached to the trailing edge structure by six hinges. The spoiler surfaces are operated by electrically signalled hydraulic actuators and in their retracted position the spoilers form the upper shroud of the inner half of the inner flaps. The main structural stops are mounted on the outer hinge fittings and, in addition, four plastic buttons are mounted on the underside of each spoiler to avoid damage to the flaps when the surfaces are retracted.

The structure comprises a multi-rib hollow body of hybrid construction. The ribs and skins are of carbon fiber epoxy resin composite material mounted on a rolled aluminum alloy front spar, with a trailing edge of titanium sheet. The hinge fittings and the actuator attachment fittings are of machined aluminum alloy and are mounted on the front spar.

Drain holes are provided between each rib along the complete length of the bottom skin.
(Ref. Fig. 001)



Spoiler 1
Figure 001

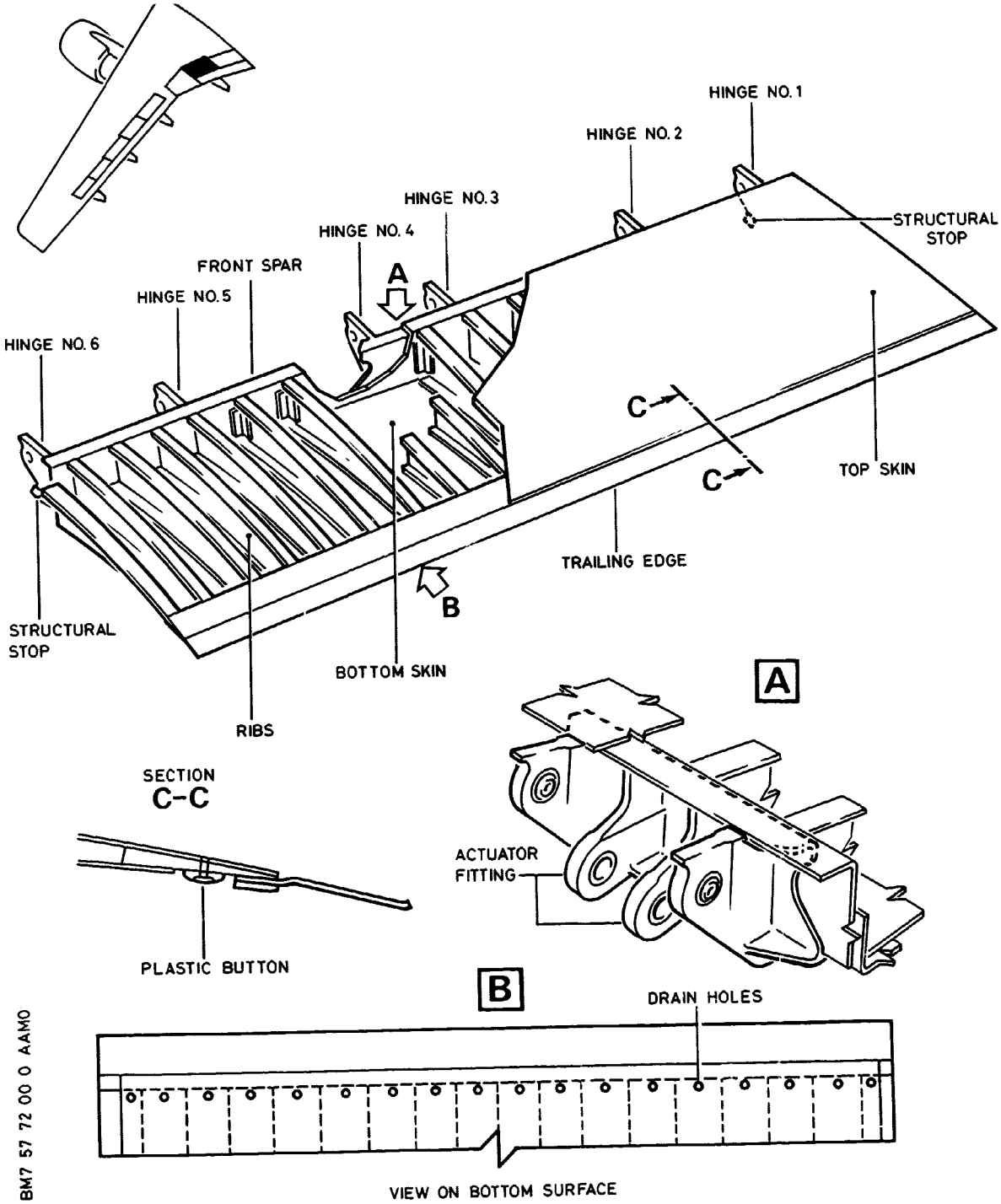
SPOILER 2 - DESCRIPTION AND OPERATION

1. General

Spoilers 2 on each wing are handed and are attached to the trailing edge structure by six hinges. The spoiler surfaces are operated by electrically signalled hydraulic actuators and in their retracted position the spoilers form the upper shroud of the outer half of the inner flaps. The main structural stops are mounted on the outer hinge fittings and, in addition, plastic buttons are mounted on the underside of each spoiler to avoid damage to the flaps when the surfaces are retracted.

The structure comprises a multi-rib hollow body of hybrid construction similar to spoiler 1 except that it has a larger surface area. The ribs and skins are of carbon fiber epoxy resin composite material mounted on a rolled aluminum alloy front spar, with a trailing edge of titanium sheet. The hinge fittings and the actuator attachment fittings are of machined aluminum alloy and are mounted on the front spar.

Drain holes are provided between each rib along the complete length of the bottom skin.
(Ref. Fig. 001)



Spoiler 2
Figure 001

SPOILERS 3 AND 4 - DESCRIPTION AND OPERATION

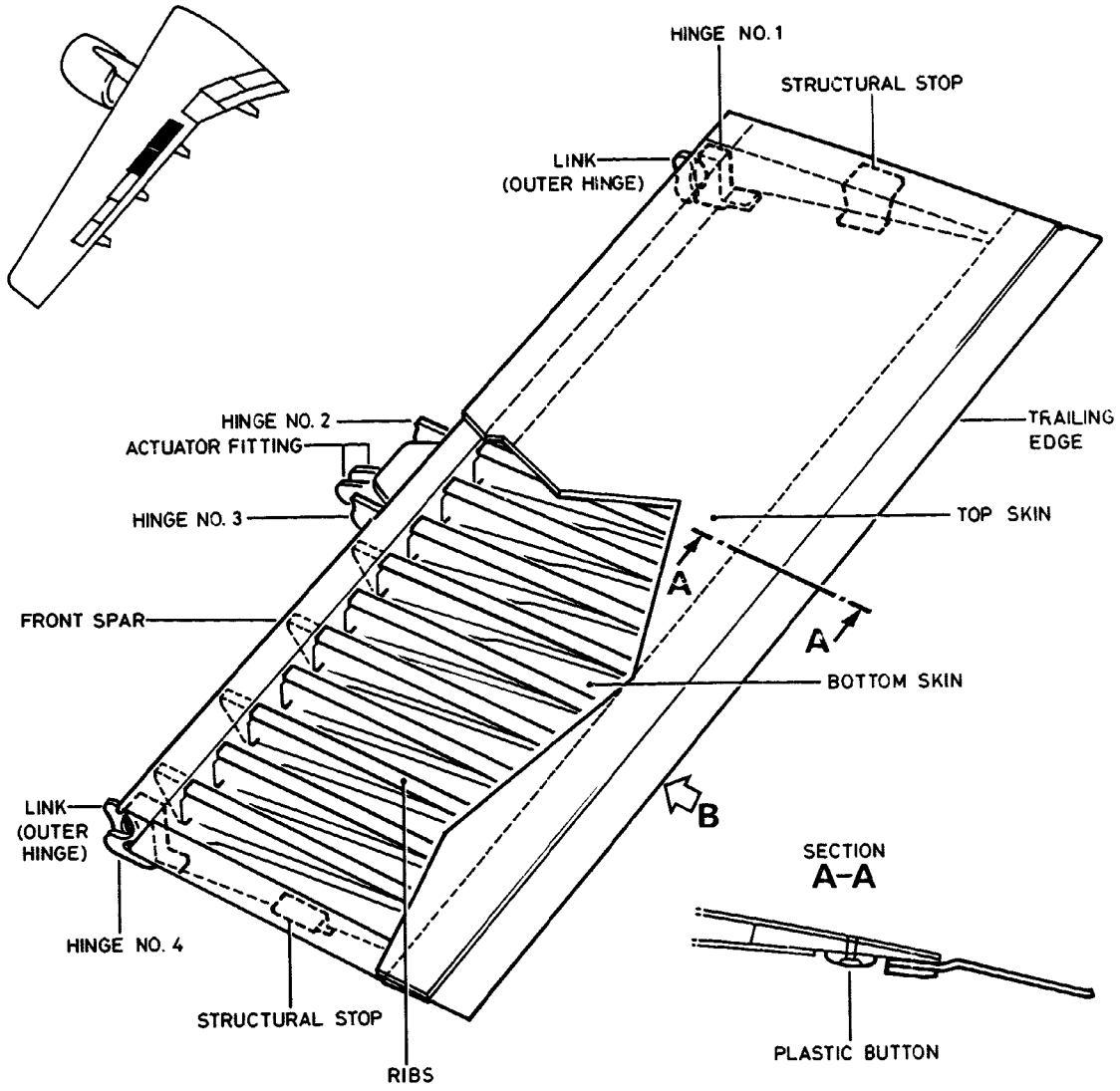
1. General

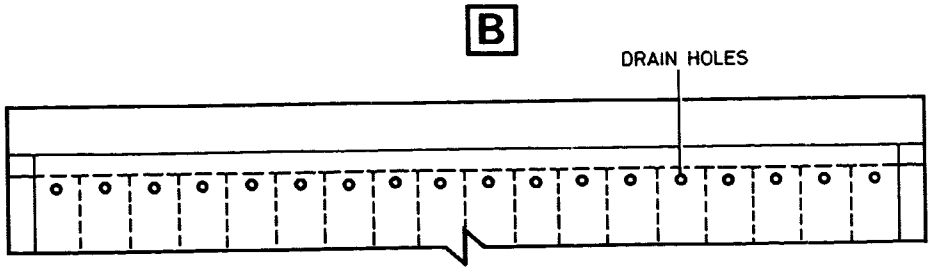
Spoilers 3 and 4 on each wing are identical (four identical surfaces per aircraft). They are each attached to the trailing edge structure by four hinges and are operated by electrically signalled hydraulic actuators. In their retracted position the spoilers form the upper shroud of the inner part of the outer flaps. The main structural stops are mounted below the outer ribs and, in addition, plastic buttons are mounted on the underside of each spoiler to avoid damage to the flaps when they are retracted.

The structure comprises a multi-rib hollow body of hybrid construction. The ribs and skins are of carbon fiber epoxy resin composite material mounted on a rolled aluminum alloy front spar, with a trailing edge of titanium sheet. The hinge and actuator attachment fittings are of machined aluminum alloy. Two main hinge fittings with the actuator fitting between them are mounted at the center of the front spar. The two outer hinge fittings are connected to the trailing edge structure by swinging links to avoid surface distortion induced by wing bending.

Drain holes are provided between each rib along the complete length of the bottom skin.

R (Ref. Fig. 001)





VIEW ON BOTTOM SURFACE

BM7 57 73 00 0 AAMO

Spoilers 3 and 4
Figure 001

SPOILER 5 - DESCRIPTION AND OPERATION

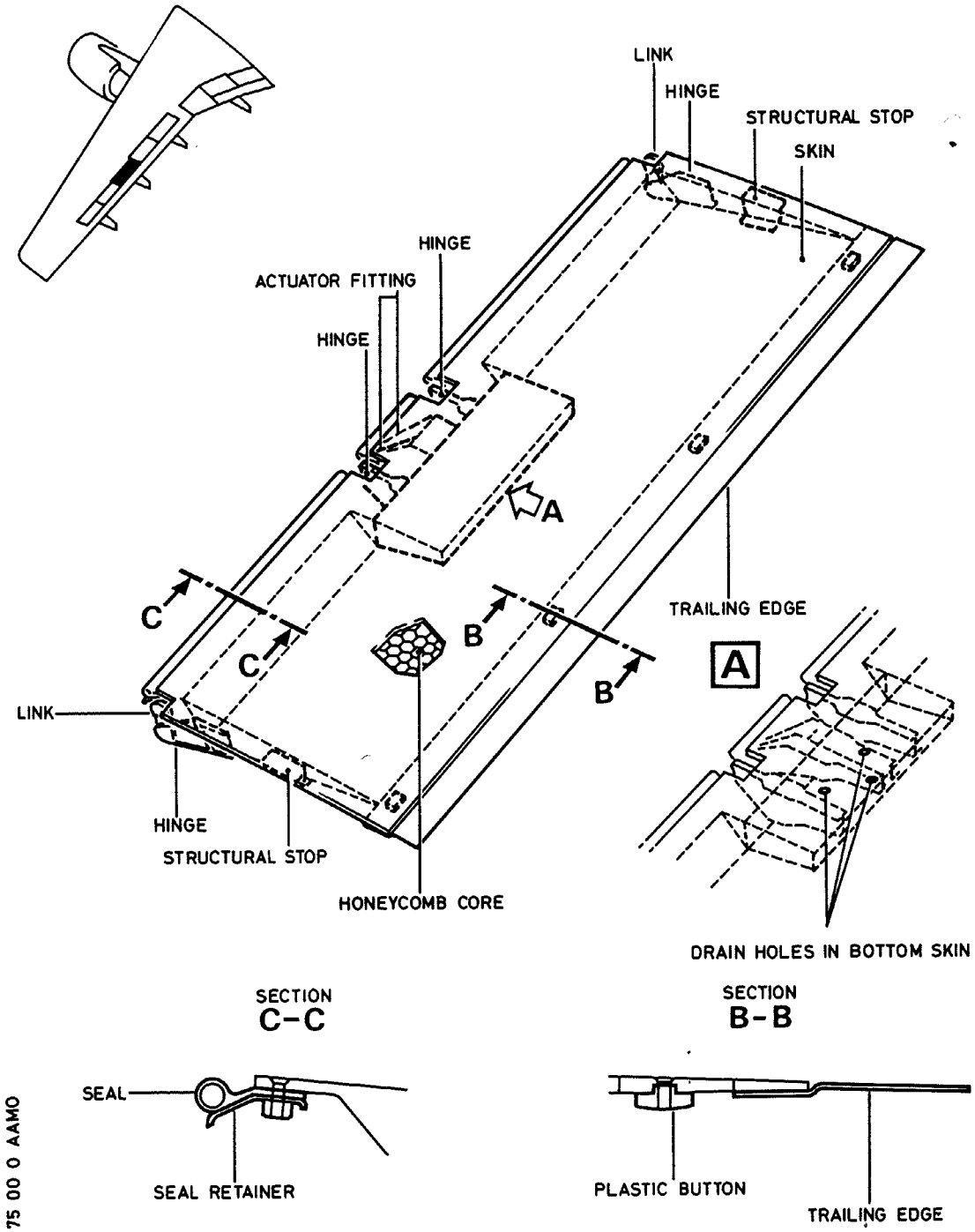
1. General

Spoilers No.5 on each wing are similar and are each attached to the wing trailing edge structure by four hinges. They are operated by electrically signalled hydraulic actuators and, when retracted, form the upper shroud for the center part of the outer flaps. Structural stops are mounted below the outer ribs and, additionally, four plastic buttons are mounted on the underside of each spoiler to avoid damage to the flaps when they are retracted.

The wedge-shaped structure is bonded from composite materials and comprises carbon fiber reinforced plastic (CFRP) skins, with a Nomex honeycomb core and the trailing edge is formed from titanium sheet. A rubber seal, in three sections, is mounted along the leading edge. The main center hinges and the actuator fitting which is mounted between them are of titanium, and the outer hinge fittings are of machined aluminum alloy. The two outer hinge fittings are connected to the wing trailing edge structure by swinging links to avoid surface distortion induced by wing bending.

Three drain holes are provided in the bottom skin in the vicinity of the center hinges and actuator fitting.

R (Ref. Fig. 001)



Spoiler 5
Figure 001

SPOILERS 6 AND 7 - DESCRIPTION AND OPERATION

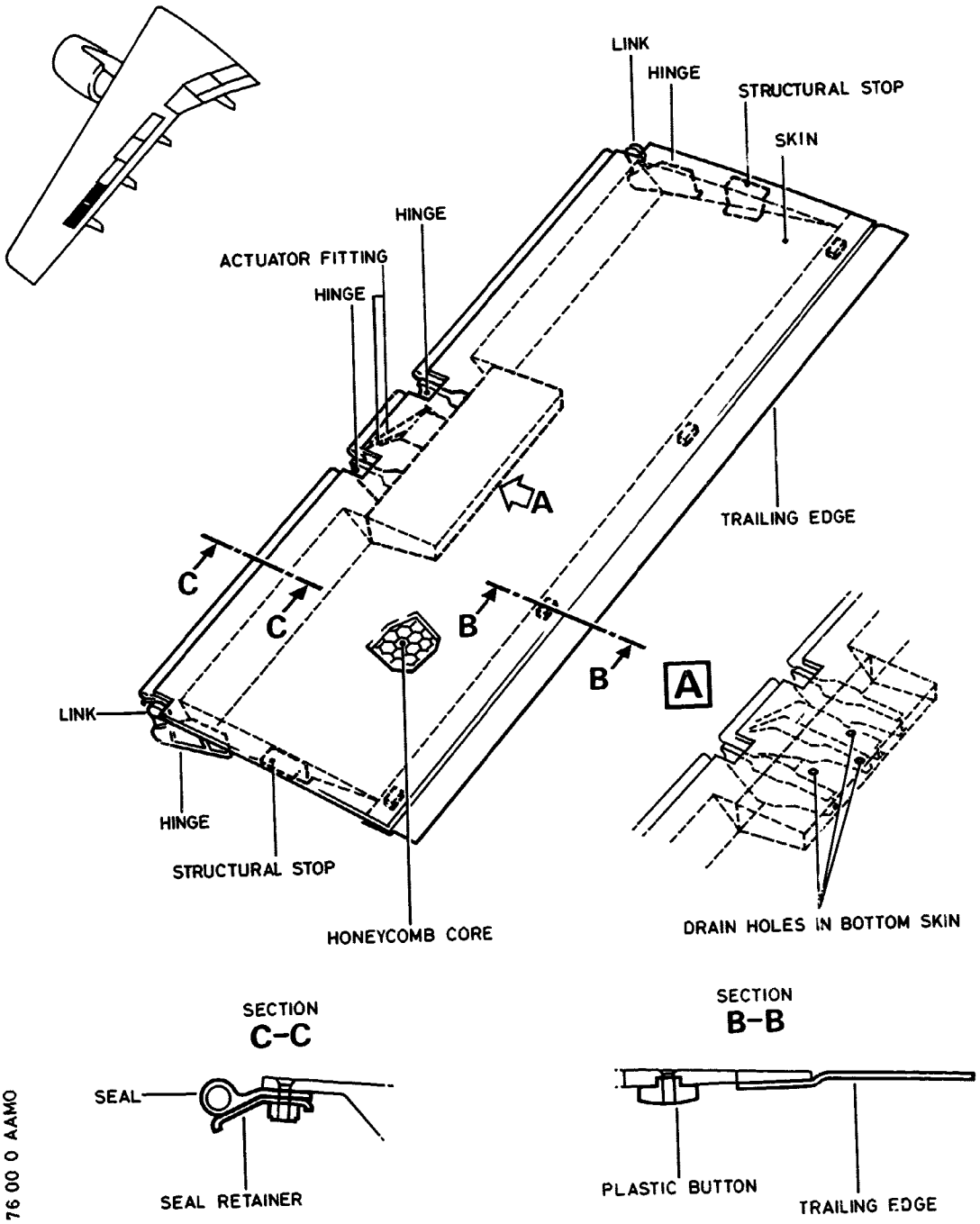
1. General

Spoilers 6 and 7 on each wing are similar and are each attached to the wing trailing edge structure by four hinges. They are operated by electrically signalled hydraulic actuators and, when retracted, form the upper shroud for the outer part of the outer flaps. Structural stops are mounted below the outer ribs and, additionally, four plastic buttons are mounted on the underside of each spoiler to avoid damage to the flaps when they are retracted.

The wedge-shaped structure is bonded from composite materials and comprises carbon fiber reinforced plastic (CFRP) skins, with a Nomex honeycomb core and the trailing edge is formed from titanium sheet. A rubber seal, in three sections, is mounted along the leading edge. The main center hinges and the actuator fitting which is mounted between them are of titanium, and the outer hinge fittings are of machined aluminum alloy. The two outer hinge fittings are connected to the wing trailing edge structure by swinging links to avoid surface distortion induced by wing bending.

Three drain holes are provided in the bottom skin in the vicinity of the center hinges and actuator fitting.

R (Ref. Fig. 001)



Spoilers 6 and 7
Figure 001